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DR-264  
November 1967

**AD**

METEOROLOGICAL DATA REPORT

NIKE-HYDAC STV SR 061  
(11 October 1967)

AND

NIKE-HYDAC STV SR 062  
(12 October 1967)

BY

JOHN M. SHARPE

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METEOROLOGICAL DATA REPORT

NIKE-HYDAC STV SR 061  
(11 October 1967)

And

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DA Task IV650212A127-02

ATMOSPHERIC SCIENCES LABORATORY  
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## ABSTRACT

Meteorological data gathered for the launching of two Nike-Hydac STV's (SR 061 and 062) are presented for the Space and Missile Systems Organization, the AVCO Corporation, and for ballistic studies. The data appear, along with calculated ballistic data, in tabular form.

## CONTENTS

	PAGE
ABSTRACT -----	iii
INTRODUCTION -----	1
DISCUSSION -----	1
TABLES	
I. Theoretical Rocket Performance Values -----	2
II. Ballistic Factors -----	3
III. Anemometer Wind Speed and Direction -----	4
IV. Pilot-Balloon-Measured Wind Data -----	6
V. Rawinsonde-Measured Wind Data -----	9
VI. Significant Level Data (Release Time: 1830 MDT) -----	10
VII. Upper Air Data (Release Time: 1830 MDT) -----	11
VIII. Mandatory Levels (Release Time: 1830 MDT) -----	18
IX. Significant Level Data (Release Time: 2100 MDT) -----	19
X. Upper Air Data (Release Time: 2100 MDT) -----	20
XI. Mandatory Levels (Release Time: 2100 MDT) -----	28
XII. Significant Level Data (Release Time: 0012 MDT) -----	29
XIII. Upper Air Data (Release Time: 0012 MDT) -----	31
XIV. Mandatory Levels (Release Time: 0012 MDT) -----	40
XV. Impact Prediction Data (SR 061) -----	41
XVI. Impact Prediction Data (SR 062) -----	42

## INTRODUCTION

Two Nike-Hydac STV Missiles were launched from Launch Complex 33, L-361, White Sands Missile Range, New Mexico.

Nike-Hydac STV, SR-061, was launched at 2249 hours MDT, 11 October 1967.

Nike-Hydac STV, SR-062, was launched at 0014 hours MDT, 12 October 1967.

Meteorological data used in conjunction with theoretical calculations to predict rocket impact were collected by the Meteorological Support Division, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The Ballistic Meteorologist for these firings was John M. Sharpe.

## DISCUSSION

Wind data for the first 216 feet above the surface were obtained from a system composed of five Aerovanes mounted on a 200-foot tower and cabled to component wind indicators.

From 216 to 4,000 feet above the surface, wind data were obtained from double-theodolite-observed balloon ascents.

Temperature, pressure, and humidity data, along with upper wind data from 4,000 to 73,331 feet above the surface, were obtained from standard rawinsonde observations.

Mean wind component values in each ballistic zone were determined from vertical cross sections by the equal-area method.

Theoretical rocket performance values and wind-weighting values as a function of altitude were provided by ASL and are the basis for the data appearing in Tables XV and XVI.

PAYOUT		210	Pounds
CORIOLIS DISPLACEMENT	WEST	4.9	Miles
TIME		20.0	Seconds
SECOND-STAGE IGNITION	ALTITUDE	35,767	Feet MSL
TIME		236	Seconds
PEAK	ALTITUDE	715,900	Feet MSL
	HEAD	2,1575	Miles/Min
UNIT WIND EFFECT	CROSS	2,2444	Miles/Mph
	TAIL	2,1672	Miles/Mph
TOWER TILT EFFECT		14.53	Miles/Degrees

TABLE I. THEORETICAL ROCKET PERFORMANCE VALUES  
NIKE-HYDAC STV, SR, 061 and 062

LAYERS IN FEET ABOVE GROUND	BALLISTIC FACTORS
4011-4060	.1256
4060-4108	.0842
4108-4148	.0533
4148-4184	.0408
4184-4216	.0262
4216-4300	.0620
4300-4400	.0580
4400-4600	.0720
4600-4800	.0580
4800-5000	.0390

LAYERS IN FEET ABOVE GROUND	BALLISTIC FACTORS
5000- 5400	.0630
5400- 6000	.0662
6000- 6500	.0350
6500- 7000	.0277
7000- 7500	.0142
7500- 8000	.0052
8000- 8160	-.0026
8160-13000	-.0141
13000-19000	-.0168
19000-25000	-.0156

LAYERS IN FEET ABOVE GROUND	BALLISTIC FACTORS
25000-30000	-.0132
30000-35767	-.0162
35767-40000	.1310
40000-45000	.0566
45000-50000	.0260
50000-55000	.0154
55000-60000	.0101
60000-65000	.0063
65000-70000	.0040
70000-7 331	.0009

TABLE II. BALLISTIC FACTORS

NIKE-HYDAC STV (SR 061 and 062)

AERO- VANE NO. *	MEAN WIND COMPONENTS IN MILES PER HOUR									
	1 2015 MDT	2 2030 MDT	3 2045 MDT	4 2100 MDT	5 2115 MDT	6 2125 MDT	7 2135 MDT	E-W	N-S	E-W
1	3.5S	3.5W	2.0S	4.0W	0.5N	0.0	0.0	2.0W	0.0	0.0
2	1.0	6.5	0.0	7.0	1.0S	4.5W	2.0N	5.0	0.0	0.0
3	0.5	8.0	0.0	6.5	0.5	10.0	2.0	9.0	1.0N	3.5W
4	1.5	6.5	1.5N	5.5	6.0	8.0	1.0	8.0	1.0	5.0
5	2.0	4.5	2.0	4.0	1.0S	5.5	0.0	5.0	0.0	5.0

TABLE III. ANEMOMETER WIND SPEED AND DIRECTION  
NIKE-HYDAC STV (SR 061 and 062)

* Heights corresponding to Aerovane Numbers:	1 = 35 Feet	3 = 128 Feet	5 = 200 Feet
	2 = 88 Feet	4 = 168 Feet	

AERO- VANE NO.*	MEAN WIND COMPONENTS IN MILES PER HOUR							
	15 2305 MDT		16 2320 MDT		17 2330 MDT		18 2340 MDT	
	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W
1	0.5S	3.5W	3.5S	1.0W	4.0S	0.5W	5.5S	0.0
2	1.0N	6.5	2.0	1.0	2.0	2.0	2.0W	4.5
3	0.0	10.5	4.0	6.0	1.0	5.5	2.5	4.0
4	1.0S	8.5	0.5	8.5	1.5	7.0	3.0	5.5
5	1.5	5.0	1.0	5.0	1.5	4.0	1.5	2.0

AERO-VANE NO.*	MEAN WIND COMPONENTS IN MILES PER HOUR					
	20 0000 MDT		21 0014 MDT			
N-S	E-W	N-S	E-W	N-S	E-W	
1	5.0S	1.0E	4.0S	0.0		
2	4.0	1.0W	5.0	1.0W		
3	4.0	1.0	5.0	3.0		
4	4.0	1.0	5.0	4.0		
5	2.0	1.5	3.0	4.0		

TABLE III. ANEMOMETER WIND SPEED AND DIRECTION (NIKE-HYDAC STV (SR 061 and 062)) (CONT.)

* Heights corresponding to Aerovane Numbers:	1 = 35 Feet	3 = 128 Feet	$\xi = 200$ Feet
	2 = 88 Feet	4 = 168 Feet	

LAYERS IN FEET ABOVE GROUND	MEAN WIND COMPONENTS IN MILES PER HOUR											
	1 2015 MDT			2 2030 MDT			3 2045 MDT			4 2100 MDT		
	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W
216- 300	1.00	3.5W	4.3S	9.0W	1.00	5.0W	0.5N	5.5W	1.0N	5.5W	2.0N	3.5W
300- 400	2.5	3.5	2.01	3.0	1.5	3.0	1.0	5.5	3.5	7.0	4.0	5.0
400- 600	4.5	4.5	3.5	3.5	1.00	2.0	1.5S	4.0	2.5	5.5	3.0	4.5
600- 800	4.0	3.5	5.5	3.5	6.0W	2.0	2.5	0.5S	4.0	0.5S	4.0	1.0
800-1000	3.0	3.5	4.0	3.5	3.5	2.0	5.0	2.0	6.0	3.5	2.0	2.5
1000-1400	1.5	3.5	2.5	4.0	3.0	2.5	3.0	1.5	2.0	2.5	1.5	2.5
1400-2000	0.0	2.0	0.5	1.9	1.0	2.5	2.5	3.0	1.5	1.0	2.0	2.0
2000-2500	1.00N	0.5N	1.0N	0.5	1.0	0.0	1.5	0.0	2.0	0.5	1.0	0.0
2500-3000	1.0	0.5	1.0	0.0	1.0	0.5S	1.0	1.0E	3.0	2.0	4.5	0.5E
3000-3500	0.58	1.0	1.0S	1.5S	2.5	0.5	3.0	1.5	4.5	1.0W	6.5	1.0W
3500-4000	0.5	1.5	1.0	4.0	1.5	5.5	0.5W	7.0	1.0W	9.0	0.5E	9.5
												1.5K

TABLE IV. PILOT-BALLOON-MEASURED WIND DATA  
NIKE-HYDRO STV (SR 061 AND 062)

LAYERS IN FEET ABOVE GROUNDED	MEAN WIND COMPONENTS IN MILES PER HOUR											
	8		9		10		11		12		13	
	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W
2000-3000	0.5N	1.0W	0.0	0.5N	0.5N	0.5N	0.4N	0.5N	1.0N	1.0W	0.5N	1.0W
3000-4000	1.0	2.0	0.5N	2.5	2.5	4.0W	1.0	4.0	2.0	3.5	1.5	2.0
4000-5000	1.5	3.5	2.0	5.0	2.0	3.5	1.5	3.5	1.5	5.0	1.5	5.5
5000-6000	2.5	4.5	2.0	2.5	0.5N	3.5	0.5	5.5	0.5	4.0	0.5N	4.5
6000-7000	2.5N	4.0	0.5S	3.5	1.0N	2.5	2.5	6.0	0.5S	3.0	1.5	2.5
7000-8000	3.0	3.5	4.5	2.0	1.0S	1.5	1.0S	4.0	2.0	0.5	0.0	2.0S
8000-9000	2.5	2.0	6.0	4.0	4.0	1.0	2.5	1.5	1.5	2.0	2.5S	2.0
9000-10000	3.0	2.0	5.5	3.0	3.5	0.5N	5.5	3.5	4.0	2.0	6.0	2.0
10000-12000	5.5	1.0	3.5	2.5	5.0	3.0N	6.5	0.5E	7.5	1.5	7.0	0.5E
12000-14000	8.0	0.5	7.0	1.0	8.0	1.0E	10.0	0.5	7.5	2.0R	6.0	2.0
14000-16000	10.0	1.0E	12.5	2.5	11.0	0.5W	9.0	2.0	9.5	0.5	7.5	2.5
											9.0	1.0

TABLE IV. PILOT-BALLOON-MEASURED WIND DATA (CONT.)  
NIRL-HYPAC STV (SR 061 and 062)

ALTITUDE IN FEET ABOVE GROUND	MEAN WIND COMPONENTS IN MILES PER HOUR											
	15 2305 MDT	16 2320 MDT	17 2330 MDT	18 2340 MDT	19 2354 MDT	20 0000 MDT	20 0016 MDT	21 0016 MDT	N-S	E-W	N-S	E-W
0-500	0.59	5.94	1.09	5.54	1.58	3.84	3.08	2.04	2.56	1.54	1.58	4.58
500-1000	0.59	5.94	1.5	6.8	1.5	3.6	3.04	1.64	5.45	2.0	1.0	4.5
1000-1500	1.65	4.5	5.5	1.0	3.0	1.5	2.0	4.5	0.53	3.5	0.0	4.0
1500-2000	1.0	4.5	0.5	5.0	2.0	2.0	3.0	4.0	3.5	3.0	0.58	4.0
2000-2500	0.58	2.58	1.0	4.0	1.0	2.0	4.0	5.0	2.04	1.5	2.04	3.0
2500-3000	4.0	3.0	1.5	3.0	3.0	2.0	4.0	2.5	3.0	1.5	2.0	1.5
3000-3500	5.0	1.5	3.5	2.0	4.5	3.5	6.5	1.0	3.5	1.5	3.5	3.0
3500-4000	6.0	1.0	6.0	1.58	5.5	2.0	6.0	1.0	4.0	0.0	3.5	0.58
4000-4500	7.5	2.0	7.5	2.0	7.0	2.5	7.0	1.0	6.0	2.5	6.0	1.5
4500-5000	9.5	0.5	8.0	1.0W	8.5	1.5	9.0	2.0	7.5	0.5	6.5	7.0

TABLE IV. PILOT-SATELLITE-MEASURED WIND DATA (CONT)  
NIMS-HYDAC STV (SR 061 and 052)

LAYERS IN FEET ABOVE GROUND	MEAN WIND COMPONENTS IN KNOTS					
	1 1830 MDT		2 2100 MDT		3 0012 MDT	
N-S	E-W	N-S	E-W	N-S	E-W	
4000- 4160	0.0	1.0W	6.0S	1.0E	7.0S	0.0
4160- 9000	5.5S	4.5	11.0	2.0W	10.5	6.0W
9000-15000	8.5	7.0	10.5	4.0	10.0	1.5
15000-21000	3.5	19.5E	5.0	27.5E	13.0	11.0E
21000-26000	7.0N	39.5	7.0N	40.5	6.5N	37.5
26000-31767	6.0	35.5	0.0	34.0	7.5S	13.0
31767-36000	9.5S	7.0	3.5N	6.0	6.0	0.0
36000-41000	0.0	6.0W	4.5	8.0W	5.5	9.5W
41000-46000	4.5N	12.0	9.0	7.5	9.0N	10.5
46000-51000	11.0	13.0	8.0	4.5	6.5	7.5
51000-56000	11.5	4.0	4.5	5.5	8.0	2.5
56000-61000	8.5	5.0E	1.5S	9.0E	9.5S	3.5E
61000-66000	13.0S	2.5W	5.0	8.5W	1.5	8.0W
66000-73331	3.0	4.0	6.0N	1.0E	10.5	4.0

TABLE V. RAWINSONDE-MEASURED WIND DATA  
NIKE-HYDAG STV (SR 061 and 062)

STATION ALTITUDE 3939.0 FEET MSL  
12 OCT. 67 1830 HRS PDT  
ASCENSION NO. 825

SIGNIFICANT LEVEL DATA  
0493003903  
WHITE SANDS SITE  
TABLE VI

WSTM SITE COORDINATES  
E 448.580 FEET  
N 185.045 FEET

PRESSURE MILIBARS MSL	ALTITUDE FEET	GEOMETRIC DEGREES	TEMPERATURE DEGREES CENTIGRADE	AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
891.0	3939.0	23.0	-23.0	-2.0	30.0
790.0	7068.6	15.4	-15.4	4.8	49.0
714.0	9845.6	7.0	-7.0	0.2	62.0
683.0	11041.4	5.1	-5.1	-5.0	48.0
671.0	11517.2	5.5	-5.5	-15.0	21.0
520.0	26156.0	11.0	-11.0	-30.0	14.0
457.0	19807.9	11.3	-11.3	-31.0	16.0
407.0	24222.7	23.2	-23.2	-40.0	19.0
369.0	26550.9	2.8	-2.8	-45.0	19.0
328.0	29299.5	3.6	-3.6	-50.0	20.0
260.0	34506.9	4.6	-4.6	0.0	-0.0**
248.0	35540.0	4.6	-4.6	0.0	-0.0**
196.0	40599.9	5.4	-5.4	0.0	-0.0**
189.0	41364.4	5.6	-5.6	0.0	-0.0**
139.0	47691.3	10.3	-10.3	0.0	-0.0**
129.0	50786.9	17.0	-17.0	0.0	-0.0**
98.0	54573.5	27.2	-27.2	0.0	-0.0**
66.0	62394.9	64.6	-64.6	0.0	-0.0**
60.0	64333.7	61.0	-61.0	0.0	-0.0**
44.0	70703.9	60.6	-60.6	0.0	-0.0**
31.0	78036.6	53.0	-53.0	0.0	-0.0**
23.0	84412.3	52.2	-52.2	0.0	-0.0**
19.5	87990.2	46.8	-46.8	0.0	-0.0**
15.5	92981.9	50.9	-50.9	0.0	-0.0**
13.0	95985.2	47.0	-47.0	0.0	-0.0**

\* RELATIVE HUMIDITY NOT SUPPORTED. ZERO VALUE ASSUMED FOR COMPUTATIONS.

STATION ALTITUDE 3989.0 FEET MSL  
AT 0CT 16T  
ASCENSION NO. 025

UPPER AIR DATA  
0493003903  
WHITE SANDS SITE  
TABLE VII

WSTM. SITE COORDINATES  
E 488, 580 FEET  
N. 185, 045 FEET.

GEOMETRY, PRESSURE, TEMPERATURE  
AIR TRAJECTORY, AIRPOINT DEGREES CENTIGRADE

REL. HUM., DENSITY, SPEED OF  
SOUND, PERCENT GM/CUBIC METER

	INDEX OF REFRACTION	WIND DATA DIRECTION DEGREES(TH)	WIND DATA SPEED KNOTS	WIND DATA SOUND DEGREES(CM)	REL. HUM. PERCENT	TEMPERATURE AIRPOINT DEGREES CENTIGRADE	GEOMETRY, PRESSURE
3989.0	0.0	1031.0	671.9	671.9	38.0	23.2	881.0
3980.7	0.0	1030.7	671.6	671.6	38.0	23.2	880.7
3985.2	0.0	1017.0	670.4	336.2	39.8	21.9	865.2
4000.0	0.0	1003.5	668.3	313.0	41.6	7.7	850.0
4500.0	0.4	990.3	657.6	289.7	43.4	6.7	835.0
5000.0	0.5	977.2	666.0	266.4	45.2	6.2	820.0
5500.0	0.5	964.4	664.4	252.4	47.0	5.5	806.0
6000.0	0.6	951.7	663.0	252.0	48.8	4.9	791.0
6500.0	0.6	939.9	661.2	252.0	51.0	4.2	777.7
7000.0	0.6	927.8	659.3	252.4	53.4	3.6	763.6
7500.0	0.6	915.8	657.6	242.2	55.7	2.8	749.9
8000.0	0.6	904.3	655.9	226.2	58.0	1.7	736.3
8500.0	0.6	892.8	654.0	212.5	60.4	0.9	723.0
9000.0	0.6	880.9	652.6	199.5	60.2	-0.4	709.9
9500.0	0.6	867.9	651.6	209.6	54.3	-2.6	696.9
10000.0	0.6	854.3	650.4	202.9	48.5	-4.8	684.1
10500.0	0.6	838.6	650.3	208.5	42.0	-14.6	671.4
11000.0	0.6	826.3	648.9	211.3	36.3	-16.2	658.7
11500.0	0.6	814.3	647.4	218.8	30.7	-17.4	646.1
12000.0	0.6	802.5	645.8	221.6	20.6	-18.5	633.9
12500.0	0.6	790.9	644.5	223.7	20.4	-19.6	621.8
13000.0	0.6	779.4	643.0	226.4	20.3	-0.7	610.0
13500.0	0.6	768.1	641.5	229.2	20.3	-1.9	598.4
14000.0	0.6	757.0	640.0	229.5	20.0	-3.2	587.0
14500.0	0.6	746.4	638.5	229.6	19.8	-4.4	575.8
15000.0	0.6	735.3	637.0	229.6	19.6	-5.6	564.9
15500.0	0.6	724.8	635.9	227.2	19.5	-6.9	554.1
16000.0	0.6	714.3	634.0	220.5	19.3	-8.1	543.6
16500.0	0.6	704.1	632.5	208.0	19.2	-9.4	533.3
17000.0	0.6	694.0	631.0	182.5	19.0	-10.6	523.1

STATION ALTITUDE 3089.0 FEET MSL  
E LONG. 67° 10' 30" EBS NAD  
ELEVATION MSL . 825

UPPER AIR DATA  
0493003903  
WHITE SANDS SITE

TABLE VII (Cont.)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREE CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF WIND DATA KNOTS	WIND DATA DIRECTION DEGREES (TQ)	INDEX OF REFRACTION	
							18.0	15.5 .2
18500.0	512.9	-11.3	682.2	630.2	12.0 .5	8.7	1.000152	
19000.0	502.9	-11.7	669.8	629.8	11.9	1.000149		
19500.0	493.0	-12.1	657.6	629.3	12.8	1.000146		
20000.0	483.2	-12.5	646.4	628.4	10.4 .8	15.0	1.000144	
20500.0	473.5	-14.0	636.4	626.9	101.3	17.3	1.000142	
21000.0	464.0	-15.2	626.6	625.6	97.9	19.0	1.000140	
21500.0	454.6	-16.5	617.0	623.9	94.5	20.8	1.000139	
22000.0	445.5	-17.7	607.5	622.4	91.8	21.6	1.000137	
22500.0	436.5	-18.9	598.2	620.9	89.4	23.1	1.000135	
23000.0	427.7	-20.2	589.0	619.6	87.4	25.2	1.000133	
23500.0	419.2	-21.6	580.0	627.8	85.5	27.5	1.000130	
24000.0	410.7	-22.7	571.1	616.3	84.1	31.2	1.000128	
24500.0	402.3	-23.8	562.2	614.9	82.9	34.8	1.000126	
25000.0	393.9	-25.0	553.0	613.5	82.6	38.1	1.000124	
25500.0	385.8	-26.2	544.0	612.1	82.9	40.7	1.000122	
26000.0	377.8	-27.3	535.2	610.7	84.0	42.4	1.000120	
26500.0	369.9	-28.6	526.5	609.2	85.1	42.2	1.000118	
27000.0	362.1	-29.5	517.8	607.8	86.0	41.3	1.000116	
27500.0	354.4	-30.7	509.2	606.3	84.8	39.9	1.000114	
28000.0	346.8	-31.9	500.8	604.9	83.1	38.9	1.000112	
28500.0	339.2	-33.0	492.5	603.4	80.6	38.2	1.000110	
29000.0	332.2	-34.2	484.4	601.9	77.8	38.0	1.000108	
29500.0	325.0	-35.3	476.2	600.5	74.8	38.0	1.000106	
30000.0	317.9	-36.4	467.9	599.8	72.6	38.0	1.000105	
30500.0	310.9	-37.6	459.7	597.7	70.6	38.0	1.000103	
31000.0	304.0	-38.7	451.7	595.3	69.4	38.7	1.000102	
31500.0	297.3	-39.8	443.9	594.9	68.3	38.5	1.000099	
32000.0	290.8	-40.9	435.0	593.5	67.8	38.5	1.000097	
32500.0	284.4	-42.0	428.5	592.0	67.6	38.4	1.000096	
33000.0	278.1	-43.1	421.1	590.6	68.1	38.4	1.000094	

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION

STATION ALTITUDE 3989.0 FEET MSL  
11 OCT. 1967 1830 HRS MOT  
ASCENSION NO. 1825

UPPER AIR DATA  
0493003903  
WHITE SANDS SITE  
TABLE VII. (Cont.)

GEOMETRIC ALTITUDE MSE FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GR/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(THT) REFRACTION	INDEX OF REFRACTION
33500.0	271.9	-44.2	-70.2	413.6	589.2	68.6	36.9
34000.0	265.9	-45.3	-75.5	406.6	587.8	69.1	34.5
34500.0	260.1	-46.4	-99.7	399.6	586.4	71.6	31.2
35000.0	254.2	-46.4	0	390.6	586.3	74.6	27.8
35500.0	248.3	-46.4	0	381.8	586.3	78.5	23.1
36000.0	242.8	-47.5	0	374.2	585.4	82.5	18.4
36500.0	237.2	-47.9	0	366.8	584.4	87.9	14.3
37000.0	231.7	-48.5	0	359.6	583.5	91.2	10.3
37500.0	226.4	-49.4	0	352.5	582.5	96.3	6.9
38000.0	221.2	-50.1	0	345.6	581.5	107.3	3.0
38500.0	216.1	-50.9	0	338.8	580.5	189.0	3.3
39000.0	211.1	-51.7	0	332.2	579.5	256.8	3.7
39500.0	206.3	-52.4	0	325.6	578.5	251.5	5.0
40000.0	201.5	-53.2	0	319.2	577.5	247.1	3.0
40500.0	196.6	-53.9	0	313.0	576.5	247.4	3.3
41000.0	192.3	-55.3	0	307.9	574.8	248.4	3.7
41500.0	187.8	-56.3	0	301.9	573.8	252.1	4.7
42000.0	183.3	-57.0	0	295.6	572.5	254.0	4.6
42500.0	178.9	-57.6	0	289.0	571.7	257.3	5.0
43000.0	174.6	-58.2	0	282.8	571.0	261.3	5.5
43500.0	170.4	-58.7	0	276.8	570.3	265.8	6.4
44000.0	166.3	-59.2	0	270.8	569.5	268.9	9.9
44500.0	162.3	-59.8	0	265.0	568.8	271.5	11.3
45000.0	158.4	-60.3	0	259.3	568.0	279.4	12.1
45500.0	154.6	-60.9	0	243.8	567.3	287.6	12.9
46000.0	150.9	-61.4	0	248.3	566.6	290.2	14.6
46500.0	147.3	-62.0	0	243.0	565.8	293.1	16.4
47000.0	143.7	-62.5	0	237.8	565.1	297.3	18.3
47500.0	140.3	-63.1	0	232.7	564.3	301.2	19.9
48000.0	136.9	-64.0	0	228.0	563.1	304.5	20.9

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3989.0 FEET #55  
IX DAY, 167 1830 HRS PDT  
ASCENSIVE NO. 825

UPPER AIR DATA  
043003903  
WHITE SANDS SITE  
TABLE VII (Cont.)

WSTH-SITE COORDINATES  
E 488° 580 FEET  
N 185° 045 FEET

GEOMETRIC ALTITUDE MSL FEEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREE CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF WIND DAY KNOTS	DIRECTION DEGREES (TIN)	WIND DAY SPEED KNOTS	REFRACTORY INDEX
								INDEX OF
4850.0	133.5	-65.0	-0.	223.6	561.6	308.1	21.4	1.000050
4900.0	130.2	-66.3	-0.	219.2	560.8	312.2	21.0	1.000049
4950.0	126.9	-67.4	-0.	214.8	558.9	316.2	20.6	1.000048
5000.0	123.8	-68.5	-0.	210.8	557.0	319.7	18.0	1.000047
5050.0	120.7	-69.7	-0.	206.7	555.5	322.2	25.8	1.000046
5100.0	117.8	-70.4	-0.	202.3	554.6	325.0	23.5	1.000045
5150.0	114.7	-70.7	-0.	197.4	554.1	322.3	21.5	1.000044
5200.0	111.8	-70.9	-0.	192.8	553.7	319.2	10.0	1.000043
5250.0	108.0	-71.2	-0.	186.0	553.4	314.9	9.4	1.000042
5300.0	106.2	-71.4	-0.	183.5	553.0	309.3	9.9	1.000041
5350.0	103.5	-71.7	-0.	179.1	552.7	307.2	11.2	1.000040
5400.0	100.9	-71.8	-0.	174.7	552.4	308.4	23.2	1.000039
5450.0	98.4	-72.2	-0.	170.5	552.0	311.9	16.3	1.000038
5500.0	95.9	-71.8	-0.	165.9	552.5	317.6	14.5	1.000037
5550.0	93.5	-71.3	-0.	161.6	553.2	322.6	13.9	1.000036
5600.0	91.2	-70.8	-0.	157.3	553.4	326.5	12.1	1.000035
5650.0	89.0	-70.3	-0.	152.7	554.5	330.4	20.7	1.000034
5700.0	86.7	-69.8	-0.	148.5	555.2	334.2	10.0	1.000033
5750.0	84.5	-69.4	-0.	144.5	555.8	337.6	9.4	1.000032
5800.0	82.4	-68.9	-0.	140.5	556.9	340.0	9.3	1.000031
5850.0	80.4	-68.6	-0.	136.7	557.2	342.0	9.7	1.000030
5900.0	78.4	-67.9	-0.	133.8	557.8	342.9	11.8	1.000029
5950.0	76.4	-67.6	-0.	129.4	558.5	344.3	13.6	1.000028
6000.0	74.4	-66.8	-0.	125.9	559.2	349.9	13.1	1.000027
6050.0	72.8	-66.4	-0.	122.4	559.8	355.6	12.6	1.000027
6100.0	70.3	-66.0	-0.	119.1	560.5	329.1	11.2	1.000027
6150.0	69.1	-65.5	-0.	115.6	561.8	30.6	10.0	1.000026
6200.0	67.3	-65.0	-0.	112.7	561.8	25.0	8.4	1.000024
6250.0	65.7	-64.6	-0.	109.6	562.6	42.4	6.9	1.000024
6300.0	64.1	-63.9	-0.	106.5	563.8	70.7	6.7	1.000024

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION

STATION ALTITUDE 3989.0 FEET MSL  
11 OCT. 67 1830 HRS MDT  
ASCENSION NO. 825

UPPER AIR DATA  
0493003903  
WHITE SANDS SITE  
TABLE VII (Cont.)

WSTM SITE COORDINATES  
E 488,580 FEET  
N 185,045 FEET

GEODETIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	SOUND METER KNOTS	INDEX OF REFRACTION	WIND DATA	
						DIRECTION DEGREES(°)	SPEED KNOTS
63500.0	62.9	-62.5	0.	-0.	**	101.9	565.0
64000.0	61.9	-61.6	0.	-0.	**	126.0	566.3
64500.0	59.9	-61.0	0.	-0.	**	97.7	567.2
65000.0	58.9	-61.0	0.	-0.	**	95.4	567.2
65500.0	56.7	-60.9	0.	-0.	**	93.1	567.2
66000.0	55.3	-60.9	0.	-0.	**	90.8	567.3
66500.0	54.0	-60.9	0.	-0.	**	88.6	567.3
67000.0	52.7	-60.8	0.	-0.	**	86.5	567.4
67500.0	51.4	-60.8	0.	-0.	**	84.4	567.4
68000.0	50.2	-60.8	0.	-0.	**	82.3	567.5
68500.0	49.0	-60.7	0.	-0.	**	80.3	567.5
69000.0	47.8	-60.7	0.	-0.	**	78.6	567.5
69500.0	46.7	-60.7	0.	-0.	**	76.5	567.6
70000.0	45.5	-60.6	0.	-0.	**	74.7	567.6
70500.0	44.4	-60.5	0.	-0.	**	72.8	567.7
71000.0	43.4	-60.3	0.	-0.	**	71.0	568.1
71500.0	42.4	-59.8	0.	-0.	**	69.2	568.8
72000.0	41.4	-59.3	0.	-0.	**	67.4	569.5
72500.0	40.4	-58.7	0.	-0.	**	65.6	570.2
73000.0	39.4	-58.2	0.	-0.	**	63.9	570.8
73500.0	38.5	-57.7	0.	-0.	**	62.3	571.5
74000.0	37.6	-57.2	0.	-0.	**	60.6	572.2
74500.0	36.7	-56.7	0.	-0.	**	59.1	572.9
75000.0	35.8	-56.1	0.	-0.	**	57.5	573.6
75500.0	35.0	-55.5	0.	-0.	**	56.0	574.3
76000.0	34.2	-55.1	0.	-0.	**	54.6	575.0
76500.0	33.4	-54.5	0.	-0.	**	53.2	575.6
77000.0	32.6	-54.1	0.	-0.	**	51.8	576.3
77500.0	31.8	-53.6	0.	-0.	**	50.5	577.0
78000.0	31.1	-53.0	0.	-0.	**	49.2	577.7

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3989.0 FEET MSL  
11 OCT. 167 1830 HRS EDT  
ELEVATION NO. 825

UPPER AIR DATA  
0493003903  
WHITE SANDS SITE  
TABLE VII. (Cont.)

WSTN SITE COORDINATES  
E 488, 580 FEET  
N 185048, 5 FEET

GEOMETRIC PRESSURE	TEMPERATURE	REL. HUM.	SPEED OF SOUND	WIND DATA
ALTITUDE FEET	AIR DEPOINT DEGREES CENTIGRADE	PERCENT	KNOTS	DIRECTION DEGREES (T)
108500.0	-30.3	-52.9	48.0	255.5
109000.0	-29.8	-52.9	46.9	254.3
109500.0	-28.9	-51.8	45.8	250.7
110000.0	-28.3	-51.8	44.7	243.6
110500.0	-27.6	-52.7	43.7	236.6
111000.0	-27.0	-52.8	42.6	224.7
111500.0	-26.4	-52.6	41.6	211.8
112000.0	-25.7	-52.5	40.7	202.6
112500.0	-25.2	-52.4	39.7	203.6
113000.0	-24.6	-52.4	38.6	205.0
113500.0	-24.5	-52.3	37.9	206.8
114000.0	-23.4	-52.3	37.0	208.9
114500.0	-22.9	-52.1	36.1	211.5
115000.0	-22.4	-51.2	35.2	218.2
115500.0	-21.9	-50.6	34.2	218.2
116000.0	-21.4	-50.8	33.3	224.8
116500.0	-20.9	-52.3	32.5	228.2
117000.0	-20.4	-52.1	31.6	228.4
117500.0	-20.0	-49.8	30.8	228.7
118000.0	-19.5	-46.8	30.0	228.9
118500.0	-19.0	-47.2	29.4	229.3
119000.0	-18.6	-47.6	28.8	229.2
119500.0	-18.2	-47.5	28.2	229.2
120000.0	-17.6	-46.8	27.6	230.2
120500.0	-17.0	-46.5	27.0	230.8
121000.0	-17.0	-46.9	26.4	237.3
121500.0	-16.6	-49.3	25.9	242.3
122000.0	-16.2	-49.7	25.3	249.9
122500.0	-15.8	-50.1	24.8	257.2
123000.0	-15.5	-50.9	24.3	1.000005

\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3989.0 FEET MSL  
21 OCT. 167  
ASCENSION NO. 825

UPPER AIR DATA  
0493003903  
WHITE SANDS SITE  
TABLE VII (Cont.)

GEOMETRIC PRESSURE ALTITUDE MSL FEET	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	SPEED OF SOUND METER KNOTS	WIND DATA DIRECTION DEGREES (TM)	SPEED KNOTS	INDEX OF REFRACTION
93500.0	15.1	-50.2	0.	-0. **	23.7	581.3
94000.0	14.8	-49.6	0.	-0. **	23.1	582.2
94500.0	14.5	-49.0	0.	-0. **	22.5	583.0
95000.0	14.2	-48.3	0.1	-0. **	21.9	583.8
95500.0	13.8	-47.7	0.	-0. **	21.3	584.6

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3989.0 FEET MSL  
17 OCT. 1967 1830 HRS MDT  
ASCENSION NO. 825

MANDATORY LEVELS  
0493003903  
WHITE SANDS SITE  
TABLE VIII

MSTM SITE COORDINATES  
E 488.580 FEET  
N 105.045 FEET

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	AIR DEGREESS CENTIGRADE	REL. HUM. PERCENT		WIND DATA	
			TEMPERATURE DEGREESS CENTIGRADE	DIRECTION DEGREES(TH)	SPEED KNOTS	
850.0	5009.	20.6	70.2	42.	312.5	0.4
800.0	6715.	16.3	53.2	48.	252.2	1.3
750.0	8501.	11.0	2.6	56.	242.0	2.7
700.0	10374.	-6.2	-2.0	56.	200.5	6.1
650.0	12359.	-13.4	-17.0	21.	216.3	11.4
600.0	14468.	-21.7	-21.7	20.	229.3	13.1
550.0	16715.	-27.6	-26.9	19.	224.2	9.3
500.0	19126.	-31.0	-31.2	18.	121.2	9.3
450.0	21750.	-37.0	-35.6	18.	92.9	20.9
400.0	24609.	-42.0	-41.3	19.	82.8	35.8
350.0	27758.	-31.4	-47.3	19.	84.1	39.2
300.0	31280.	-39.3	-57.8	12.	66.6	38.6
250.0	35301.	-46.6	0.	+0.4*	77.6	24.5
200.0	40091.	-53.4	0.	-0.4*	247.2	5.6
175.0	42876.	-58.1	0.	+0.4*	261.0	6.1
150.0	46036.	-61.6	0.	-0.4*	290.4	15.2
125.0	49695.	-68.1	0.	-0.4*	318.4	18.2
100.0	54035.	-72.0	0.	-0.4*	308.9	14.0
80.0	58383.	-68.3	0.	-0.4*	342.9	9.9
70.0	61028.	-65.7	0.	-0.4*	46.6	10.7
60.0	64131.	-61.0	0.	-0.4*	139.4	8.6
50.0	67680.	-60.8	0.	-0.4*	201.4	10.6
40.0	72417.	-58.5	0.	-0.4*	340.9	1.6
30.0	78435.	-52.9	0.	-0.4*	254.9	6.5
25.0	82298.	-52.4	0.	-0.4*	204.0	10.8
20.0	87066.	-47.6	0.	-0.4*	228.8	16.1
15.0	93265.	-50.0	0.	-0.4*	-0.4*	

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3989.0 FEET MSL  
11 OCT 67 2100 HRS MDT  
ASCENSION NO. 826

SIGNIFICANT LEVEL DATA  
0493003904  
WHITE SANDS SITE  
TABLE IX.

WSTM SITE COORDINATES  
E 488.50 FEET  
N 185.045 FEET

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE FEET	TEMPERATURE AIR DEGREE CENTIGRADE	REL.HUM. PERCENT	
			DEWPNT	GRADE
881.8	3989.0	18.5	52.0	
871.0	4337.7	20.9	44.0	
775.0	7612.0	13.5	47.0	
737.0	8992.6	9.0	21.0	
675.0	11364.8	4.4	-12.6	
437.0	22515.5	-18.1	-37.3	17.0
339.0	28563.0	-33.8	-50.0	18.0
228.0	37384.5	-51.1	0.0	-0.0
178.0	42619.7	-56.8	0.0	-0.0
163.0	44442.7	-60.4	0.0	-0.0
105.0	53214.3	-72.7	0.0	-0.0
73.0	60370.2	-66.1	0.0	-0.0
65.0	62716.2	-62.1	0.0	-0.0
59.0	64686.9	-63.4	0.0	-0.0
37.0	74347.7	-54.8	0.0	-0.0
16.0	92284.9	-49.5	0.0	-0.0
10.0	102683.7	-40.5	0.0	-0.0
6.0	114314.8	-36.7	0.0	-0.0

\*\* RELATIVE HUMIDITY NOT SUPPLIED. : ZERO VALUE ASSUMED FOR COMPUTATIONS. :

STATION ALTITUDE 3989.0 FEET MSL  
11 OCT. '67 2100 HRS WDT  
ASCENSION NO. 826

UPPER AIR DATA  
0493003904  
WHITE SANDS SITE  
TABLE X

WSRM SITE CORDON NARROWS  
E 488.380 FEET  
W 145.045 FEET

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	INDEX OF REFRACTION	
							WIND SPEED KNOTS	WIND DIA 0°
3989.0	881.8	18.5	52.0	1048.4	666.6	01.0	1.000263	1.000263
4000.0	881.5	18.6	51.7	1047.8	666.8	01.0	1.000263	1.000275
4500.0	866.0	20.5	46.6	1022.6	668.6	01.0	1.000269	1.000264
5000.0	850.7	19.4	45.1	1008.6	667.5	136.8	1.000264	1.000259
5500.0	835.6	18.3	45.1	994.8	666.1	176.4	1.000264	1.000254
6000.0	820.9	17.8	45.5	981.2	664.8	175.9	1.000264	1.000249
6500.0	806.4	16.0	46.0	967.8	663.4	175.3	1.000264	1.000244
7000.0	792.1	14.9	46.4	954.6	662.8	175.5	1.000264	1.000242
7500.0	778.0	13.8	46.9	941.2	660.7	175.5	1.000264	1.000240
8000.0	764.8	12.2	47.3	929.5	659.0	168.3	1.000264	1.000238
8500.0	750.3	10.6	47.8	917.8	657.4	167.0	1.000264	1.000238
9000.0	736.8	9.0	48.3	906.7	655.3	166.9	1.000264	1.000232
9500.0	723.3	8.0	48.8	893.4	654.0	172.5	1.000264	1.000230
10000.0	710.0	7.0	49.0	880.5	652.7	10.0	1.000264	1.000229
10500.0	697.0	6.0	49.2	867.8	651.3	161.4	1.000264	1.000227
11000.0	684.2	5.0	49.4	855.5	650.1	191.6	1.000264	1.000226
11500.0	671.5	4.0	49.6	842.0	649.0	204.8	1.000264	1.000225
12000.0	658.8	3.0	49.8	829.6	647.6	215.4	1.000264	1.000224
12500.0	645.8	2.0	50.0	816.8	646.4	224.0	1.000264	1.000223
13000.0	633.3	1.0	50.2	803.7	645.2	229.5	1.000264	1.000222
13500.0	621.1	0.0	50.4	791.2	644.0	235.3	1.000264	1.000221
14000.0	609.2	-0.6	50.6	778.7	642.7	247.9	1.000264	1.000220
14500.0	597.3	-1.0	50.8	766.7	641.5	240.7	1.000264	1.000219
15000.0	585.8	-2.0	50.9	754.7	640.3	242.7	1.000264	1.000218
15500.0	574.8	-3.0	50.9	743.8	639.1	240.6	1.000264	1.000217
16000.0	563.4	-5.0	50.9	731.8	637.9	238.4	1.000264	1.000216
16500.0	552.5	-6.0	50.9	720.0	636.7	235.5	1.000264	1.000215
17000.0	541.8	-7.0	50.9	708.9	635.4	205.2	1.000264	1.000214
17500.0	531.4	-8.0	50.9	697.8	634.2	167.4	1.000264	1.000213
18000.0	521.1	-9.0	50.9	687.0	633.0	135.6	1.000264	1.000212

STATION ALTITUDE 3489.0 FEET MSL  
LL OCT 67 ASCENT NO. 826 2100 HRS MDT

UPPER AIR DATA  
0493003904.  
WHITE SANDS SITE  
TABLE X (Cont.)

WEST SIDE COORDINATES  
E 438.380 FEET  
N 185.048 FEET

SEALEVEL ALTITUDE	PRESSURE IN MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES(TYN)	WIND DATA KNOWS	INDEX OF REFRACTION
19500	511.2	-10.0	21.0	676.4	631.8	122.5	10.5	1.000154
19000	501.5	-14.0	20.5	665.9	630.6	113.2	11.6	1.000151
19500	491.9	-12.0	20.0	655.6	629.3	108.3	16.9	1.000149
20000	482.0	-13.0	19.5	645.4	628.2	104.7	19.8	1.000146
20500	472.1	-14.0	19.0	635.4	626.9	101.7	22.4	1.000144
21000	463.6	-15.0	18.5	625.6	625.6	98.7	25.6	1.000141
21500	454.7	-16.0	18.0	616.0	624.4	95.7	28.9	1.000139
22000	445.9	-17.0	17.5	606.5	623.2	93.8	31.6	1.000137
22500	437.3	-18.0	17.0	597.2	622.0	91.9	34.6	1.000134
23000	428.6	-19.0	16.5	587.7	620.4	91.6	36.7	1.000132
23500	419.9	-20.0	17.0	578.5	618.6	91.3	38.7	1.000130
24000	410.6	-22.0	17.5	569.4	617.2	91.3	39.2	1.000128
24500	402.5	-23.3	17.0	560.5	615.6	91.3	39.6	1.000126
25000	393.7	-24.5	17.5	551.7	614.0	91.4	39.5	1.000124
25500	385.5	-25.8	17.5	543.0	612.4	91.1	39.7	1.000123
26000	377.5	-27.0	17.6	534.6	610.8	89.7	40.7	1.000120
26500	369.7	-28.4	17.6	526.3	609.2	87.2	41.9	1.000118
27000	362.0	-29.7	17.6	518.0	607.5	85.4	42.2	1.000116
27500	354.5	-31.0	17.7	510.1	605.9	83.4	42.6	1.000114
28000	347.3	-32.3	17.8	502.2	604.3	81.1	43.1	1.000112
28500	339.9	-33.6	17.9	494.4	602.6	78.6	42.4	1.000111
29000	332.4	-34.7	17.9	485.6	601.3	75.6	41.6	1.000109
29500	325.0	-35.8	17.8	476.8	600.8	73.0	42.0	1.000106
30000	317.8	-36.6	17.9	468.1	598.9	70.6	42.8	1.000103
30500	310.7	-37.6	17.9	459.6	597.6	70.0	43.0	1.000103
31000	303.8	-38.6	17.7	451.3	596.8	72.0	42.9	1.000101
31500	297.1	-39.6	17.5	443.1	595.1	75.5	42.5	1.000099
32000	290.5	-40.5	17.0	435.1	593.6	79.0	39.3	1.000097
32500	284.0	-41.5	16.5	427.2	592.6	82.3	35.4	1.000095
33000	277.7	-42.5	16.0	419.5	591.4	85.7	31.3	1.000094

\*\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3989.0 FEET MSL  
11 OCT. 1967 2100 HRS PDT  
ASCENSION NO. 826

UPPER AIR DATA  
0493003904  
WHITE SANDS SITE  
TABLE X (cont.)

GEOMETRIC ALTITUDE HSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT	SOUND GH/CUBIC METER	SPEED OF WIND KNOTS	WIND DATA INDEX		
						DIRECTION DEGREES (THI)	SPEED KNOTS	REFRACTION
33500.0	271.5	-43.5	-64.5	411.9	390.0	27.0	89.3	1.0000092
34000.0	265.5	-44.5	-66.3	404.5	388.8	22.3	99.0	1.0000090
34500.0	259.6	-45.6	-68.2	397.2	387.6	27.2	96.7	1.0000088
35000.0	253.8	-46.6	-70.3	400.0	386.3	13.6	104.0	1.0000087
35500.0	248.2	-47.4	-72.2	383.0	385.0	174.2	123.8	1.0000086
36000.0	242.8	-48.4	-75.6	376.1	383.8	6.3	123.8	1.0000084
36500.0	237.3	-49.4	-78.9	369.4	382.5	139.2	96.9	1.0000082
37000.0	232.0	-50.2	-84.6	362.8	381.2	130.0	44.2	1.0000081
37500.0	226.8	-51.2	-84.6	356.0	380.5	118.2	44.2	1.0000079
38000.0	221.5	-51.8	-84.6	348.3	379.4	90.6	11.1	1.0000078
38500.0	216.3	-52.3	-84.6	341.2	378.6	89.5	3.6	1.0000076
39000.0	211.2	-52.9	-84.6	334.8	377.9	35.7	3.6	1.0000074
39500.0	206.3	-53.6	-84.6	327.1	377.2	23.3	23.3	1.0000073
40000.0	201.5	-53.9	-84.6	320.3	376.5	2.7	4.2	1.0000072
40500.0	196.8	-54.5	-84.6	313.3	375.8	330.0	4.2	1.0000070
41000.0	192.2	-55.0	-84.6	307.0	375.2	306.3	5.2	1.0000069
41500.0	187.7	-55.6	-84.6	300.5	374.3	293.2	5.8	1.0000067
42000.0	183.3	-56.1	-84.6	294.3	373.6	284.0	7.0	1.0000066
42500.0	179.0	-56.7	-84.6	288.1	372.9	283.4	8.6	1.0000064
43000.0	174.8	-57.6	-84.6	282.4	372.7	282.8	9.2	1.0000063
43500.0	170.6	-58.5	-84.6	276.8	370.4	285.6	9.2	1.0000062
44000.0	166.5	-59.5	-84.6	271.6	369.2	285.4	9.7	1.0000060
44500.0	162.5	-60.5	-84.6	266.3	367.8	295.3	10.2	1.0000059
45000.0	158.5	-61.2	-84.6	260.5	366.9	305.5	10.7	1.0000058
45500.0	154.6	-61.9	-84.6	254.9	366.0	305.0	12.3	1.0000057
46000.0	150.8	-62.6	-84.6	249.5	365.0	306.1	13.6	1.0000056
46500.0	147.0	-63.3	-84.6	244.1	364.2	308.4	15.2	1.0000054
47000.0	143.4	-64.0	-84.6	238.8	363.8	311.0	16.4	1.0000053
47500.0	139.8	-64.7	-84.6	233.7	362.2	313.2	17.2	1.0000052
48000.0	136.6	-65.6	-84.6	228.7	361.2	315.0	17.6	1.0000051

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3989.0 FEET MSL  
15 OCT 1967 2100 HRS MET  
ASCENSION NO. 1826

UPPER AIR DATA  
0493003904  
WHITE SANDS SITE  
TABLE X (cont)

GEOMETRY	PRESSURE ALTITUDE KSC FEET	TEMPERATURE AIR DEWPONT DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OK	REFRACTION
49500.0	133.0	-66.1	223.0	560.0	17.3	318.7	5.0	1.0000050	
49000.0	129.7	-66.8	219.0	559.4	15.9	323.6	4.9	1.0000049	
48500.0	126.5	-67.5	214.3	558.0	14.6	329.0	4.8	1.0000048	
50000.0	123.4	-68.2	209.7	557.6	12.5	335.4	4.7	1.0000047	
50500.0	120.3	-68.9	205.2	556.2	10.7	341.4	4.6	1.0000046	
51000.0	117.3	-69.6	200.8	555.0	9.0	342.3	4.5	1.0000045	
51500.0	114.4	-70.3	196.5	554.0	7.4	343.1	4.4	1.0000044	
52000.0	111.6	-71.0	192.3	553.0	6.8	338.8	4.3	1.0000043	
52500.0	108.8	-71.7	188.2	552.0	6.5	333.0	4.2	1.0000042	
53000.0	106.1	-72.4	184.2	551.6	6.6	329.7	4.1	1.0000041	
53500.0	103.5	-72.4	179.6	551.0	7.2	329.2	4.0	1.0000040	
54000.0	100.9	-72.0	174.7	552.0	7.9	328.3	3.9	1.0000039	
54500.0	98.4	-71.5	170.0	552.0	8.9	326.4	3.8	1.0000038	
55000.0	95.9	-71.1	165.3	553.0	9.8	324.3	3.7	1.0000037	
55500.0	93.5	-70.6	160.8	554.0	8.1	319.9	3.6	1.0000036	
56000.0	91.1	-70.1	156.4	554.0	6.6	315.0	3.5	1.0000035	
56500.0	88.9	-69.7	152.2	555.0	7.1	307.2	3.4	1.0000034	
57000.0	86.6	-69.2	148.0	556.0	6.8	298.7	3.3	1.0000033	
57500.0	84.3	-68.7	144.5	556.0	6.3	300.2	3.2	1.0000032	
58000.0	82.3	-68.3	140.0	557.0	5.3	309.8	3.1	1.0000031	
58500.0	80.3	-67.8	136.2	557.0	5.6	321.9	3.0	1.0000030	
59000.0	78.3	-67.4	132.5	556.0	6.5	345.0	2.9	1.0000029	
59500.0	76.3	-66.9	129.9	559.0	7.1	37.1	2.8	1.0000028	
60000.0	74.4	-66.4	125.4	559.0	27.5			1.0000027	
60500.0	72.5	-65.9	121.9	560.0	49.0			1.0000026	
61000.0	70.6	-65.0	118.5	561.0	75.2			1.0000025	
61500.0	69.0	-64.2	115.1	562.0	97.1			1.0000024	
62000.0	67.3	-63.3	111.8	564.0	112.1			1.0000024	
62500.0	65.7	-62.5	108.6	565.0	127.2			1.0000024	
63000.0	64.1	-62.3	105.9	565.0	138.4			1.0000024	

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3989.0 FEET MSL  
11 OCT. 167 2100 HRS MOT  
ASCENSION NO. 826

UPPER AIR DATA  
0493003934  
WHITE SANDS SITE  
TABLE X (cont.)

WSTM SITE COORDINATES  
E 488.580 FEET  
N 185.045 FEET

GEOMETRIC ALTITUDE ASCE FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC CENTIMETER	SPEED OF WIND KNOTS	DIRECTION DEGREES (T)	INDEX OF REFRACTION	MIND DATA	
								NEVER	NOON
63500.0	62.5	-62.6	-0*	103.8	148.1	11.2	1.000029	11.6	11.6
64000.0	61.0	-62.9	-0*	101.2	156.5	159.4	1.000024	11.8	11.8
64500.0	59.5	-63.3	-0*	98.9	156.4	172.5	1.000022	10.7	10.7
65000.0	58.0	-63.5	-0*	96.4	156.3	185.7	1.000021	10.4	10.4
65500.0	56.7	-62.7	-0*	93.9	156.2	199.4	1.000021	10.2	10.2
66000.0	55.4	-62.3	-0*	91.4	156.1	213.9	1.000020	9.7	9.7
66500.0	54.1	-61.8	-0*	89.9	156.0	233.9	1.000020	9.3	9.3
67000.0	52.8	-61.3	-0*	86.8	156.6	253.8	1.000019	9.2	9.2
67500.0	51.5	-60.9	-0*	84.8	156.7	265.9	1.000019	9.0	9.0
68000.0	50.3	-60.5	-0*	82.4	156.7	277.6	1.000018	8.8	8.8
68500.0	49.1	-60.0	-0*	80.2	156.8	289.8	1.000018	8.5	8.5
69000.0	47.9	-59.6	-0*	78.1	156.9	302.8	1.000017	8.3	8.3
69500.0	46.6	-59.1	-0*	76.1	156.9	322.4	1.000017	8.0	8.0
70000.0	45.3	-58.7	-0*	74.1	157.0	349.3	1.000017	7.8	7.8
70500.0	44.0	-58.2	-0*	72.1	157.0	370.8	1.000016	7.6	7.6
71000.0	43.5	-57.8	-0*	70.1	157.1	42.0	1.000016	7.4	7.4
71500.0	42.5	-57.3	-0*	68.0	157.2	68.0	1.000016	7.2	7.2
72000.0	41.4	-56.9	-0*	66.0	157.2	100.3	1.000016	7.0	7.0
72500.0	40.5	-56.4	-0*	65.0	157.3	133.2	1.000016	6.8	6.8
73000.0	39.5	-56.0	-0*	63.4	157.3	160.3	1.000016	6.6	6.6
73500.0	38.5	-55.6	-0*	61.7	157.4	176.7	1.000016	6.4	6.4
74000.0	37.6	-55.1	-0*	60.2	157.5	198.2	1.000016	6.2	6.2
74500.0	36.7	-54.6	-0*	58.6	157.5	204.4	1.000015	6.0	6.0
75000.0	35.9	-54.1	-0*	57.2	157.6	212.6	1.000015	5.8	5.8
75500.0	35.2	-54.5	-0*	55.6	157.6	224.9	1.000015	5.7	5.7
76000.0	34.3	-54.3	-0*	54.6	157.6	236.7	1.000014	5.6	5.6
76500.0	33.5	-54.2	-0*	53.2	157.6	246.7	1.000014	5.5	5.5
77000.0	32.7	-54.0	-0*	52.0	157.6	254.7	1.000014	5.4	5.4
77500.0	31.9	-53.9	-0*	50.7	157.6	266.8	1.000014	5.3	5.3
78000.0	31.2	-53.7	-0*	49.8	157.6	276.8	1.000014	5.2	5.2

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3989.0 FEET MSL  
11 OCT. '67 2100 HRS MDT  
ASCENSION NO. 826

UPPER AIR DATA  
0493003904  
WHITE SANDS SITE  
TABLE X (Cont)

MSTN SITE COORDINATES  
E 488° 580 FEET  
N 185,045 FEET

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(180) KNOTS	INDEX OF REFRACTION
76500.0	30.5	-53.6	0°	-0. **	48.4	577.0	204.9	1.000011
79000.0	29.8	-53.4	0°	-0. **	47.2	577.2	205.3	1.000011
79500.0	29.1	-53.3	0°	-0. **	46.0	577.4	208.4	1.000010
80000.0	28.4	-53.1	0°	-0. **	45.0	577.6	211.8	1.000010
80500.0	27.8	-53.0	0°	-0. **	43.9	577.8	215.1	1.000010
81000.0	27.1	-52.8	0°	-0. **	42.9	578.0	218.2	1.000010
81500.0	26.5	-52.7	0°	-0. **	41.9	578.2	221.3	1.000009
82000.0	25.9	-52.5	0°	-0. **	40.9	578.3	224.3	1.000009
82500.0	25.3	-52.4	0°	-0. **	39.9	578.5	227.4	1.000009
83000.0	24.7	-52.2	0°	-0. **	38.9	578.7	230.5	1.000009
83500.0	24.1	-52.1	0°	-0. **	38.0	578.9	233.7	1.000008
84000.0	23.6	-51.9	0°	-0. **	37.1	579.1	236.9	1.000008
84500.0	23.0	-51.8	0°	-0. **	36.2	579.3	241.6	1.000008
85000.0	22.5	-51.7	0°	-0. **	35.4	579.5	249.6	1.000008
85500.0	22.0	-51.5	0°	-0. **	34.5	579.7	257.6	1.000008
86000.0	21.5	-51.4	0°	-0. **	33.7	579.9	263.8	1.000007
86500.0	21.0	-51.2	0°	-0. **	32.9	580.1	269.2	1.000007
87000.0	20.5	-51.1	0°	-0. **	32.1	580.3	274.5	1.000007
87500.0	20.0	-5.9	0°	-0. **	31.4	580.5	276.2	1.000007
88000.0	19.5	-5.8	0°	-0. **	30.6	580.7	277.6	1.000007
88500.0	19.1	-5.6	0°	-0. **	29.9	580.9	279.0	1.000007
89000.0	18.7	-5.5	0°	-0. **	29.2	581.0	278.1	1.000005
89500.0	18.2	-5.3	0°	-0. **	28.5	581.2	277.2	1.000006
90000.0	17.8	-5.2	0°	-0. **	27.8	581.4	276.1	1.000006
90500.0	17.4	-5.0	0°	-0. **	27.2	581.6	273.5	1.000006
91000.0	17.0	-4.9	0°	-0. **	26.5	581.8	270.8	1.000006
91500.0	16.6	-4.9	0°	-0. **	25.9	582.0	267.9	1.000006
92000.0	16.2	-4.9	0°	-0. **	25.3	582.2	259.7	1.000006
92500.0	15.6	-4.9	0°	-0. **	24.7	582.4	251.5	1.000005
93000.0	15.5	-4.8	0°	-0. **	24.1	583.1	243.3	1.000005

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3989.0 FEET MSL  
11 OCT. 67 2100 HRS. NOT  
ASCENSION NO. 826

UPPER AIR DATA  
04493003904  
WHITE SANDS SITE  
TABLE X (Cont.)

GEOPHYSICAL ALTITUDE IN FEET	PRESSURE MILLIBARS	TEMPERATURE DEGREES CENTIGRADE	AIR DEPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF WIND KNOTS	DIRECTION DEGREES (TN)	WIND DATA INDEX OF REFRACTION
84593500.0	-46.4	-46.4	-45.4	-0.0	583.7	243.4	10.3	1.000003
84594000.0	-46.0	-46.0	-45.0	-0.0	584.2	244.0	10.1	1.000005
84594500.0	-47.6	-47.6	-46.6	-0.0	584.8	244.6	10.0	1.000005
84595000.0	-47.2	-47.2	-46.2	-0.0	585.4	247.9	9.8	1.000005
84595500.0	-46.7	-46.7	-45.7	-0.0	585.9	252.0	9.4	1.000005
84596000.0	-46.3	-46.3	-45.3	-0.0	586.5	256.1	9.1	1.000005
84596500.0	-45.9	-45.9	-44.9	-0.0	587.0	262.3	8.4	1.000005
84597000.0	-45.4	-45.4	-44.4	-0.0	587.6	269.6	7.4	1.000004
84597500.0	-45.0	-45.0	-44.0	-0.0	588.2	277.0	6.9	1.000004
84598000.0	-44.6	-44.6	-43.6	-0.0	588.7	283.9	6.3	1.000004
84598500.0	-44.1	-44.1	-43.1	-0.0	589.3	290.4	6.2	1.000004
84599000.0	-43.7	-43.7	-42.7	-0.0	589.8	296.8	6.4	1.000004
84599500.0	-43.3	-43.3	-42.3	-0.0	590.4	300.1	6.7	1.000004
84600000.0	-42.8	-42.8	-41.8	-0.0	590.9	297.4	7.4	1.000004
84601000.0	-42.4	-42.4	-41.4	-0.0	591.5	294.7	8.1	1.000003
84601500.0	-42.0	-42.0	-41.0	-0.0	592.1	293.1	8.8	1.000003
84602000.0	-41.5	-41.5	-40.5	-0.0	592.6	295.8	9.4	1.000003
84602500.0	-41.1	-41.1	-40.1	-0.0	593.2	298.5	10.0	1.000003
84603000.0	-40.7	-40.7	-39.7	-0.0	593.7	301.0	10.5	1.000003
84603500.0	-40.4	-40.4	-39.4	-0.0	594.0	297.1	9.7	1.000003
84604000.0	-40.2	-40.2	-39.2	-0.0	594.3	293.1	9.0	1.000003
84604500.0	-40.1	-40.1	-39.1	-0.0	594.5	289.2	8.2	1.000003
84605000.0	-39.9	-39.9	-38.9	-0.0	594.7	279.2	8.0	1.000003
84605500.0	-39.7	-39.7	-38.7	-0.0	594.9	267.8	7.9	1.000003
84606000.0	-39.6	-39.6	-38.6	-0.0	595.1	296.4	7.7	2.000003
84606500.0	-39.4	-39.4	-38.4	-0.0	595.3	293.1	9.0	1.000003
84607000.0	-39.3	-39.3	-38.3	-0.0	595.5	295.9	11.2	1.000003
84607500.0	-39.1	-39.1	-38.1	-0.0	595.7	258.8	13.5	1.000003
84608000.0	-38.9	-38.9	-37.9	-0.0	595.9	262.6	15.6	1.000003
	-38.8	-38.8	-37.8	-0.0	596.1	268.4	17.1	1.000003

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3989.0 FEET MSL  
 XI OCT, '67 2100 HRS MOT  
 ASCENSION NO. 826

UPPER AIR DATA  
 0493003904  
 WHITE SANDS SITE

TABLE X (Cont)

GEOMETRIC ALTITUDE MSE FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT	SPEED OF SOUND METER KNOTS	WIND DATA DIRECTION DEGREE(S) (TM) KNOTS	INDEX OF REFRACTION
108500.0	7.7	-38.5	0*	-0*	18.7	1.000003
109000.0	7.8	-38.4	0*	-0**	20.3	1.000003
109500.0	7.9	-38.3	0*	-0**	22.2	1.000002
110000.0	7.3	-38.1	0*	-0**	24.2	1.000002
110500.0	7.1	-37.9	0*	-0**	291.8	1.000002
111000.0	6.9	-37.8	0*	-0**	297.7	1.000002
111500.0	6.8	-37.6	0*	-0**	10.3	1.000002
112000.0	6.6	-37.5	0*	-0**	10.0	1.000002
112500.0	6.5	-37.3	0*	-0**	9.8	1.000002
113000.0	6.4	-37.1	0*	-0**	9.6	1.000002
113500.0	6.2	-37.0	0*	-0**	9.2	1.000002
114000.0	6.1	-36.8	0*	-0**	9.0	1.000002

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3989.0 FEET MSL  
11 OCT. '67 2100 HRS MDT  
ASCENSION NO. 826

MANDATORY LEVELS  
0493003904  
WHITE SANDS SITE  
TABLE XI

WSTM SITE COORDINATES  
E 488.580 FEET  
N 185.045 FEET

PRESSURE MILLIBARS	GEOPOENTIAL FEET	TEMPERATURE DEGREES	AIR DEWPPOINT CENTIGRADE	REL.HUM. PERCENT	WIND DATA	
					DIRECTION DEGREES(TH)	SPEED KNOVS
850.0	5028.	19.6	7.1	45.0	94.0	1.3
800.0	6728.	15.5	4.0	46.0	175.0	4.0
750.0	8511.	10.6	3.0	59.0	168.3	8.6
700.0	10382.	6.3	-5.1	44.0	179.3	11.0
650.0	12361.	2.4	-14.7	27.0	222.2	11.5
600.0	14468.	-1.7	-19.2	25.0	240.6	11.5
550.0	16720.	-6.2	-24.1	23.0	215.4	5.9
500.0	19144.	-11.1	-29.5	20.0	111.6	14.7
450.0	21771.	-16.6	-35.6	18.0	94.5	30.6
400.0	24638.	-23.6	-41.7	17.0	91.3	39.6
350.0	27788.	-31.8	-48.4	18.0	81.9	42.7
300.0	31306.	-39.1	-57.6	12.0	74.5	41.9
250.0	35336.	-47.1	-71.8	4.0	112.0	11.3
200.0	40097.	-54.1	0.0	-0.0	351.3	4.4
175.0	42887.	-57.8	0.0	-0.0	282.9	8.5
150.0	46040.	-62.7	0.0	-0.0	306.6	14.3
125.0	49682.	-67.8	0.0	-0.0	332.9	13.3
100.0	54023.	-71.8	0.0	-0.0	327.3	8.2
80.0	58384.	-67.8	0.0	-0.0	323.7	5.7
70.0	61037.	-64.7	0.0	-0.0	83.6	6.3
60.0	64150.	-63.2	0.0	-0.0	168.5	11.3
50.0	67849.	-60.3	0.0	-0.0	279.5	9.0
40.0	72457.	-56.2	0.0	-0.0	147.9	3.6
30.0	78501.	-53.5	0.0	-0.0	205.2	17.6
25.0	82360.	-52.3	0.0	-0.0	228.6	20.0
20.0	87111.	-50.9	0.0	-0.0	276.3	11.9
15.0	93282.	-48.3	0.0	-0.0	243.7	10.2
10.0	102196.	-40.5	0.0	-0.0	299.5	10.2
7.0	110216.	-37.8	0.0	-0.0	-	-

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3989.0 FEET MSL  
11 OCT. '67 0012 HRS MDT  
ASCENSION NO. 827

SIGNIFICANT LEVEL DATA  
0499003901  
WHITE SANDS SITE  
TABLE XII

WEST SITE COORDINATES  
E 488° 580 FEET  
N 185° 045 FEET

PRESSURE MILLIBARS MSL	GEOMETRIC ALTITUDE FEET	TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT
		AIR DEWPPOINT	
882.2	3989.0	14.2	64.0
872.0	4315.2	19.8	11.4
868.0	4445.7	21.0	11.7
799.0	6781.1	16.1	5.1
787.0	10139.9	6.3	0.8
664.0	11029.3	4.3	1.0
663.0	11860.1	1.5	-4.0
648.0	12466.2	1.5	-11.3
630.0	13214.8	1.5	-18.0
562.0	16201.0	-4.4	-22.5
520.0	18190.6	-10.1	-26.9
500.0	19183.9	-10.5	-26.4
307.0	30914.6	-36.5	-49.5
250.0	35504.9	-46.2	-0.0
204.0	39885.6	-53.4	-0.0
176.0	42971.3	-59.7	-0.0
172.0	43445.5	-59.2	-0.0
150.0	44926.2	-62.9	-0.0
139.0	47763.8	-65.6	-0.0
127.0	49560.3	-68.6	-0.0
122.0	50354.3	-68.4	-0.0
118.0	51010.2	-70.5	-0.0
104.0	53470.3	-72.5	-0.0
96.0	55031.8	-70.0	-0.0
70.0	61266.0	-67.8	-0.0
63.0	63383.0	-62.9	-0.0
43.0	71239.7	-58.0	-0.0
37.0	74365.5	-58.5	-0.0
33.0	76768.0	-54.0	-0.0
26.0	81847.1	-52.3	-0.0

\*\* RELATIVE HUMIDITY NOT SUPPLIED. ZERO VALUE ASSUMED FOR COMPUTATIONS.

STATION 14 VV12E 3984.0 FEET MSL  
11 DEG. 67' 00.2 HRS ADT  
ASCENTION NO. 827

SIGNIFICANT LEVEL DATA  
04/0003901  
WHITE SANDS SITE  
TABLE XII (Cont.)

PRESSURE GEOMETRIC MILLIBARS MSL FEET	ALTITUDE DEGREES CENTIGRADE	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
20.0	87495.1	-49.6	0.
14.0	96815.5	-50.3	0.
9.5	100473.6	-44.6	0.
9.0	109026.4	-46.3	0.
6.4	112549.0	-38.6	0.
3.0	124558.5	-34.9	0.

\* RELATIVE HUMIDITY NOT SUPPLIED. ZERO VALUE ASSUMED FOR COMPUTATIONS.

STATION ALTITUDE 3400.0 FEET MSL  
11 OCT 67 0012 HRS MDT  
ASCENSION NO. 827

UPPER AIR DATA  
0499003901  
WHITE SANDS SITE  
TABLE XIII

GEOPOTENTIAL ALTIMETER MSL FEET	PRESSURE MILLIBARS	AIR DEWPOINT DEGREES CENTIGRADE	TEMPERATURE CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES (TN)	WIND DATA KNOTS	INDEX OF REFRACTION
34894.0	882.2	14.2	7.5	64.0	1064.9	661.5	0.	0.	1.000285
40087.0	881.9	14.4	7.7	63.8	1063.8	661.8	0.8	0.0	1.000289
43004.0	866.9	20.9	11.6	54.8	1020.5	669.7	37.7	0.9	1.000287
50000.0	851.2	19.8	10.2	53.3	1006.6	668.3	74.7	1.8	1.000279
59003.0	836.8	18.0	8.7	51.8	992.8	667.0	111.6	2.6	1.000271
60004.0	821.4	17.7	7.3	50.3	979.3	665.7	148.5	3.5	1.000264
65000.0	802.9	16.7	5.9	48.6	965.9	664.3	160.7	4.3	1.000257
70000.0	792.2	15.5	4.9	49.3	953.0	662.9	165.3	5.0	1.000252
75000.0	778.6	14.0	4.4	52.3	940.6	661.2	169.8	5.9	1.000248
80000.0	764.3	12.5	3.9	55.3	928.4	659.5	179.5	7.0	1.000244
85000.0	750.5	11.1	3.2	58.2	916.4	657.7	186.8	8.8	1.000240
90000.0	737.0	9.6	2.6	61.2	904.6	656.0	197.5	10.6	1.000236
95000.0	723.7	8.2	2.0	64.2	893.0	654.3	203.2	11.7	1.000232
100000.0	710.8	6.7	1.1	67.2	881.6	652.5	207.1	12.3	1.000228
105000.0	697.6	5.5	0.9	72.5	869.2	651.1	212.2	12.7	1.000226
110000.0	684.7	4.4	1.0	78.6	856.6	649.8	221.6	12.4	1.000223
115000.0	672.0	2.7	-1.8	72.2	845.2	647.7	230.5	11.9	1.000215
120000.0	659.5	1.5	-5.4	60.3	834.7	646.1	237.5	11.1	1.000207
125000.0	647.2	1.5	-11.6	37.3	819.8	645.8	244.2	9.7	1.000195
130000.0	635.1	1.5	-15.7	26.5	804.8	645.6	250.8	7.9	1.000188
135000.0	623.1	0.9	-18.4	22.1	791.4	644.9	251.5	5.5	1.000184
140000.0	611.3	-0.1	-19.2	22.3	779.3	643.7	246.2	3.5	1.000180
145000.0	599.7	-1.0	-19.9	22.4	767.3	642.5	220.9	2.5	1.000177
150000.0	588.4	-2.0	-20.7	22.6	755.6	641.4	193.2	3.0	1.000174
155000.0	577.3	-3.0	-21.4	22.8	744.0	640.2	163.0	4.9	1.000171
160000.0	566.3	-4.0	-22.2	22.9	732.6	639.0	158.6	8.1	1.000169
165000.0	555.5	-5.3	-23.1	23.2	722.0	637.5	161.0	11.5	1.000166
170000.0	544.7	-6.7	-24.3	23.4	711.3	635.8	162.2	13.9	1.000163
175000.0	534.2	-8.1	-25.4	23.7	701.9	634.1	164.1	15.5	1.000161
180000.0	523.9	-9.6	-26.5	23.9	692.2	632.3	167.0	15.9	1.000158

STATION ALTITUDE 3000.0 FEET MSI  
11 OCT. '67 0012 HRS MDT  
ASCENTION NO. 827

UPPER AIR DATA  
0496093901  
WHITE SANDS SITE  
TABLE VIII (CONT)

WSTM SITE COORDINATES  
E 488.5690 FEET  
N 185.045 FEET

GEOMETRIC ALTITUDE FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREESES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES(UTN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
28300.0	513.7	-10.2	24.6	680.4	631.5	169.3	14.8	1.000155
29000.0	503.6	-10.4	25.6	667.6	631.3	171.2	12.9	1.000153
29500.0	493.5	-12.2	27.0	656.0	630.4	172.0	11.3	1.000150
30000.0	483.3	-12.3	28.0	645.3	629.0	170.1	9.7	1.000147
30500.0	473.4	-13.4	29.0	634.7	627.7	159.0	8.7	1.000145
31000.0	463.6	-14.5	30.0	624.3	626.3	144.4	9.2	1.000142
31500.0	454.8	-15.6	30.9	614.9	623.0	146.8	11.7	1.000139
32000.0	444.6	-16.7	31.9	604.4	623.6	145.0	15.1	1.000137
32500.0	435.6	-17.8	32.9	594.3	622.3	107.6	19.0	1.000135
33000.0	426.6	-19.0	33.9	584.6	620.9	103.7	22.3	1.000132
33500.0	417.9	-20.1	34.9	575.1	619.5	100.6	25.5	1.000130
34000.0	409.3	-21.2	35.9	565.8	618.2	97.8	28.8	1.000128
34500.0	400.8	-22.3	36.9	556.6	616.8	95.4	31.9	1.000126
35000.0	392.6	-23.4	37.8	547.5	615.4	93.6	35.0	1.000123
35500.0	384.5	-24.5	38.8	538.7	614.1	91.3	36.8	1.000121
36000.0	376.6	-25.6	39.8	530.0	612.7	88.9	37.9	1.000119
36500.0	368.9	-26.7	40.8	521.4	611.3	87.3	37.7	1.000117
37000.0	361.3	-27.8	41.8	513.0	609.9	85.4	37.6	1.000115
37500.0	353.8	-28.9	42.8	504.7	608.5	83.4	37.6	1.000113
38000.0	346.6	-30.0	43.8	496.6	607.2	82.8	38.3	1.000111
38500.0	339.4	-31.1	44.8	488.6	605.8	82.7	39.2	1.000110
39000.0	332.4	-32.3	45.7	480.8	604.4	84.6	39.2	1.000108
39500.0	325.6	-33.4	46.7	473.1	603.0	86.7	38.7	1.000106
40000.0	318.9	-34.5	47.7	465.5	601.6	89.5	38.4	1.000104
40500.0	312.3	-35.6	48.7	458.0	600.2	93.2	35.4	1.000102
41000.0	305.8	-36.7	49.9	450.6	598.8	98.7	29.4	1.000101
41500.0	299.5	-37.7	51.8	442.6	597.4	103.5	25.2	1.000099
42000.0	292.4	-38.8	53.8	434.8	596.1	107.7	20.9	1.000097
42500.0	286.0	-39.9	56.0	427.8	594.8	113.7	16.7	1.000095
43000.0	279.7	-40.9	58.3	419.5	593.4	120.2	12.6	1.000094

\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3980.0 FEET MSL  
11 OCT. 1967 0012 HRS. NOT  
ASCENSION NO. A27

UPPER AIR DATA  
04990003901  
WHITE SANDS SITE  
TABLE XIII (Cont.)

MSTM SITE COORDINATES  
E 488.380 FEET  
N 185.045 FEET

GEOMETRIC ALTITUDE MSE FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENIGRADE	REL. HUM. PERCENT	DENSITY GA/CUBIC METER	SOUND KNOTS	WIND DATA DIRECTION DEGREES(TIN) REFRACTION	INDEX OF REFRACTION	
							10.3	10.2
33500.0	273.5	-42.0	10.9**	412.1	592.0	130.3	1.000092	1.000090
34000.0	267.4	-43.0	-63.9	404.9	590.7	140.6	8.2	1.000090
34500.0	261.5	-44.0	-67.7	5.5**	397.7	589.3	150.7	1.000089
35000.0	255.7	-45.1	-73.2	2.7**	360.7	588.0	157.9	5.8
35500.0	250.1	-46.2	-99.5	0.0**	383.9	586.6	153.2	1.000087
36000.0	244.3	-47.0	-0.0	**	376.4	585.5	150.7	1.000085
36500.0	238.7	-47.8	-0.0	**	369.1	584.5	156.8	1.000084
37000.0	233.2	-48.7	-0.0	**	362.0	583.4	164.9	1.000082
37500.0	227.9	-49.5	-0.0	**	355.0	582.3	160.3	1.000081
38000.0	222.7	-50.3	-0.0	**	348.1	581.3	193.7	1.000079
38500.0	217.6	-51.1	-0.0	**	343.4	580.2	199.9	4.7
39000.0	212.6	-51.9	-0.0	**	334.8	579.1	203.8	1.000078
39500.0	207.7	-52.8	-0.0	**	328.3	578.0	199.5	3.0
40000.0	202.9	-53.6	-0.0	**	322.0	576.9	198.2	1.000076
40500.0	198.1	-54.7	-0.0	**	315.9	575.6	205.9	6.8
41000.0	193.4	-55.7	-0.0	**	309.8	574.2	213.6	1.000075
41500.0	188.8	-56.7	-0.0	**	304.0	572.9	221.5	1.000073
42000.0	184.4	-57.7	-0.0	**	298.2	571.5	230.2	1.000072
42500.0	180.0	-58.7	-0.0	**	292.5	570.2	240.3	1.000070
43000.0	175.8	-59.7	-0.0	**	286.8	568.9	253.1	1.000069
43500.0	171.5	-59.3	-0.0	**	279.5	569.4	269.8	1.000068
44000.0	167.4	-60.6	-0.0	**	274.4	567.7	283.9	1.000067
44500.0	163.4	-61.8	-0.0	**	269.4	566.0	293.8	1.000066
45000.0	159.4	-63.0	-0.0	**	264.3	564.5	300.7	1.000065
45500.0	155.5	-63.4	-0.0	**	258.4	563.9	301.1	1.000064
46000.0	151.7	-63.9	-0.0	**	252.6	563.2	301.2	1.000063
46500.0	148.0	-64.4	-0.0	**	247.0	562.6	300.6	1.000062
47000.0	144.4	-64.9	-0.0	**	241.5	561.9	299.9	1.000061
47500.0	140.8	-65.3	-0.0	**	236.1	561.3	303.3	1.000060
48000.0	137.4	-66.0	-0.0	**	231.0	560.4	306.7	1.000059

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3989.0 FEET MSL  
15 OCT. 67 0012 HRS MDT  
ASCESSION NO. 827

UPPER AIR DATA  
04960003901  
WHITE SANDS SITE  
TABLE XIII (cont.)

GEOMETRIC ALTITUDE FEET	PRESSURE MILIBARS	TEMPERATURE AIR DEGREE CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	INDEX OF REFRACTION
49500.0	134.0	-66.8	0.	226.2	559.3	312.6	1.000050
49000.0	130.6	-67.7	0.	221.5	558.2	319.2	1.000049
48500.0	127.4	-68.5	0.	216.9	557.0	327.0	1.000048
50000.0	124.2	-68.5	0.	211.4	557.0	335.9	1.000047
50500.0	121.0	-68.9	0.	206.5	556.5	341.1	1.000046
51000.0	118.1	-68.1	0.	202.9	554.3	338.2	1.000045
51500.0	115.1	-70.6	0.	198.2	553.8	334.7	1.000044
52000.0	112.2	-71.3	0.	193.6	553.2	327.0	1.000043
52500.0	109.3	-71.7	0.	189.1	552.6	319.3	1.000042
53000.0	106.5	-72.5	0.	184.6	552.1	318.4	1.000041
53500.0	103.8	-72.5	0.	180.3	551.6	317.8	1.000040
54000.0	101.2	-71.7	0.	175.0	552.7	317.6	1.000039
54500.0	98.7	-70.9	0.	169.9	553.6	317.7	1.000038
55000.0	96.2	-70.1	0.	165.0	554.9	318.2	1.000037
55500.0	93.7	-69.8	0.	160.7	555.2	319.1	1.000036
56000.0	91.4	-69.7	0.	156.5	555.5	319.0	1.000035
56500.0	89.1	-69.5	0.	152.5	555.7	315.0	1.000034
57000.0	86.9	-69.3	0.	148.1	555.9	311.1	1.000033
57500.0	84.7	-69.1	0.	144.7	556.2	313.6	1.000032
58000.0	82.6	-69.0	0.	140.9	556.4	317.4	1.000031
58500.0	80.5	-68.8	0.	137.3	556.7	336.0	1.000030
59000.0	78.5	-68.6	0.	133.7	556.9	133.8	1.000029
59500.0	76.6	-68.4	0.	130.3	557.1	51.4	1.000028
60000.0	74.6	-68.2	0.	126.9	557.4	93.4	1.000027
60500.0	72.8	-68.1	0.	123.6	557.6	135.4	1.000026
61000.0	70.9	-67.9	0.	120.4	557.9	152.9	1.000025
61500.0	69.2	-67.3	0.	117.1	558.7	161.9	1.000025
62000.0	67.5	-66.1	0.	113.6	560.3	170.7	9.0
62500.0	65.8	-64.9	0.	110.2	561.8	179.2	10.2
63000.0	64.2	-63.6	0.	106.9	563.4	187.6	11.3

AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3969.0 FEET MSL  
 21 OCT. 167 0012 HRS MDT  
 ASCENSION NO. 827

UPPER AIR DATA  
 0499003901  
 WHIYE SANDS SITE  
 TABLE XIII (Cont.)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF WIND DATA DIRECTION DEGREES KNOTS	INDEX OF REFRACTION
635000.0	62.6	-62.8	-0.	103.8	197.8	11.7
640000.0	61.1	-62.5	-0.	101.1	208.1	12.0
645000.0	61.7	-62.2	-0.	98.6	217.7	12.1
650000.0	58.2	-61.9	-0.	96.0	226.8	12.2
655000.0	56.8	-61.6	-0.	93.6	235.8	12.2
660000.0	55.5	-61.3	-0.	91.2	244.5	11.6
665000.0	54.1	-61.0	-0.	88.9	253.1	11.0
670000.0	52.8	-60.6	-0.	86.6	260.9	9.5
675000.0	51.6	-60.3	-0.	84.4	268.5	7.7
680000.0	50.3	-60.0	-0.	82.3	272.1	5.9
685000.0	49.2	-59.7	-0.	80.2	268.9	4.2
690000.0	47.9	-59.4	-0.	78.2	269.5	2.5
695000.0	46.8	-59.1	-0.	76.2	266.0	0
700000.0	45.7	-58.8	-0.	74.2	226.7	3.0
705000.0	44.6	-58.5	-0.	72.3	186.3	3.4
710000.0	43.5	-58.2	-0.	70.5	160.7	4.3
715000.0	42.5	-58.0	-0.	68.8	161.1	6.0
720000.0	41.5	-57.1	-0.	67.2	162.4	9.1
725000.0	40.3	-56.2	-0.	65.6	164.1	10.2
730000.0	39.5	-55.3	-0.	64.1	165.8	11.3
735000.0	38.6	-54.6	-0.	62.6	161.5	7.7
740000.0	37.7	-53.7	-0.	61.1	171.0	9.1
745000.0	36.8	-52.8	-0.	59.6	176.0	11.0
750000.0	35.9	-51.9	-0.	57.9	182.2	10.5
755000.0	35.1	-50.9	-0.	56.3	187.2	9.8
760000.0	34.2	-50.0	-0.	54.8	191.0	9.0
765000.0	33.4	-49.0	-0.	53.3	194.9	8.1
770000.0	32.6	-48.0	-0.	51.9	202.5	7.6
775000.0	31.9	-47.0	-0.	50.6	213.4	7.5
780000.0	31.1	-46.0	-0.	49.4	224.3	7.3
					230.7	7.3

STATION ALTITUDE 3969.0 FEET  
11 SEC. 167 0012 HRS PDT  
ELEVATION NO. 827

UPPER AIR DATA  
0499003901  
WHITE SANDS SITE

TABLE XIII (Cont.)

GEOMETRIC ALTITUDE MIL FEET	PRESSURE MILLIBARS	TEMPERATURE DEGREES CENTIGRADE	AIR DEMPPOINT PERCENT	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SOUND KNOTS	WIND DATA	
							DIRECTION DEGREES(TN)	SPEED KNOTS
78900.0	30.4	-53.4	0.0	-0.0*	48.2	577.2	232.7	7.4
78000.0	29.7	-53.3	0.0	-0.0*	47.5	577.4	234.8	7.4
79500.0	29.0	-53.1	0.0	-0.0*	46.0	577.6	237.9	8.0
80000.0	28.4	-52.9	0.0	-0.0*	44.9	577.8	242.2	9.2
80500.0	27.7	-52.8	0.0	-0.0*	43.8	578.1	246.9	10.3
81000.0	27.1	-52.6	0.0	-0.0*	42.7	578.3	249.0	11.1
81500.0	26.4	-52.4	0.0	-0.0*	41.7	578.5	249.4	11.5
82000.0	25.8	-52.2	0.0	-0.0*	40.7	578.8	249.8	11.8
82500.0	25.2	-52.0	0.0	-0.0*	39.7	579.1	249.8	12.3
83000.0	24.6	-51.7	0.0	-0.0*	38.8	579.4	249.4	13.0
83500.0	24.1	-51.5	0.0	-0.0*	37.9	579.7	249.0	13.8
84000.0	23.5	-51.3	0.0	-0.0*	36.9	580.0	247.6	14.0
84500.0	23.0	-51.0	0.0	-0.0*	36.1	580.3	246.9	14.0
85000.0	22.5	-50.8	0.0	-0.0*	35.2	580.6	242.4	13.9
85500.0	21.9	-50.6	0.0	-0.0*	34.3	580.9	239.4	14.2
86000.0	21.4	-50.3	0.0	-0.0*	33.5	581.3	236.2	14.5
86500.0	20.9	-50.1	0.0	-0.0*	32.7	581.6	233.0	14.8
87000.0	20.5	-49.8	0.0	-0.0*	31.9	581.9	229.6	14.2
87500.0	20.0	-49.6	0.0	-0.0*	31.2	582.2	223.6	13.6
88000.0	19.5	-49.4	0.0	-0.0*	30.3	582.1	222.6	13.1
88500.0	19.1	-49.1	0.0	-0.0*	29.8	582.1	222.3	13.1
89000.0	18.7	-48.7	0.0	-0.0*	29.1	582.0	222.0	13.2
89500.0	18.2	-48.4	0.0	-0.0*	28.4	582.0	222.4	13.4
90000.0	17.8	-48.0	0.0	-0.0*	27.8	581.9	225.0	13.8
90500.0	17.4	-47.8	0.0	-0.0*	27.2	581.9	227.5	14.2
91000.0	17.0	-47.5	0.0	-0.0*	26.5	581.8	231.8	14.6
91500.0	16.6	-47.2	0.0	-0.0*	25.9	581.6	238.7	15.2
92000.0	16.2	-46.9	0.0	-0.0*	25.4	581.7	245.7	15.7
92500.0	15.9	-46.6	0.0	-0.0*	24.8	581.7	252.7	16.0
93000.0	15.5	-46.3	0.0	-0.0*	24.2	581.6	260.0	16.0

\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3989.0 FEET MSL  
 11 OCT. 167 0012 HRS. MET  
 ASCENSION NO. 827

UPPER AIR DATA  
 0499003901  
 WHITE SANDS SITE  
 TABLE XIII (Cont.)

GEOGRAPHIC ALTITUDE IN FEET MSL	PRESSURE IN MILLIBARS	TEMPERATURE AIR DEPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GR/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	WIND SPEED KNOTS	INDEX OF REFRACTION
93300.0	15.2	-50.1	0.	-0.	23.7	581.6	267.2	1.000005
94000.0	14.8	-50.1	0.	-0.	23.1	581.5	269.1	1.000005
94500.0	14.5	-50.1	0.	-0.	22.6	581.5	268.6	1.000005
95000.0	14.1	-50.2	0.	-0.	22.1	581.4	268.2	1.000005
95500.0	13.8	-50.2	0.	-0.	21.6	581.4	268.7	1.000005
96000.0	13.5	-50.2	0.	-0.	21.1	581.4	269.1	1.000005
96500.0	13.2	-50.3	0.	-0.	20.6	581.3	270.5	1.000005
97000.0	12.9	-50.0	0.	-0.	20.1	581.6	264.6	1.000004
97500.0	12.6	-49.2	0.	-0.	19.6	582.7	258.7	1.000004
98000.0	12.3	-48.5	0.	-0.	19.1	583.7	253.5	1.000004
98500.0	12.0	-47.7	0.	-0.	18.6	584.7	254.2	1.000004
99000.0	11.8	-46.9	0.	-0.	18.1	585.7	255.0	1.000004
99500.0	11.5	-46.1	0.	-0.	17.6	586.7	251.8	1.000004
100000.0	11.2	-45.3	0.	-0.	17.2	587.7	234.3	1.000004
100500.0	11.0	-44.5	0.	-0.	16.8	588.6	216.9	1.000004
101000.0	10.7	-43.7	0.	-0.	16.4	588.2	205.3	1.000004
101500.0	10.5	-43.3	0.	-0.	16.1	587.8	205.8	1.000004
102000.0	10.3	-43.6	0.	-0.	15.7	587.3	208.2	1.000003
102500.0	10.0	-43.9	0.	-0.	15.4	586.9	211.9	1.000003
103000.0	9.8	-43.3	0.	-0.	15.1	586.5	219.0	1.000003
103500.0	9.6	-43.9	0.	-0.	14.7	587.0	226.1	1.000003
104000.0	9.4	-45.5	0.	-0.	14.4	587.5	233.3	1.000003
104500.0	9.2	-45.1	0.	-0.	14.0	588.0	244.0	1.000003
105000.0	9.0	-44.7	0.	-0.	13.7	588.5	254.7	1.000003
105500.0	8.8	-44.3	0.	-0.	13.4	589.0	265.4	1.000003
106000.0	8.6	-43.9	0.	-0.	13.0	589.6	274.6	1.000003
106500.0	8.4	-43.5	0.	-0.	12.7	590.1	278.8	1.000003
107000.0	8.2	-43.1	0.	-0.	12.4	590.6	282.9	1.000003
107500.0	8.0	-42.7	0.	-0.	12.1	591.1	287.0	1.000003
108000.0	7.8	-42.3	0.	-0.	11.8	591.6	288.8	1.000003

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3489.0 FEET ASL  
21 OCT. 67 0012 MRS MDI  
ACCESSION NO. 827

UPPER AIR DATA  
0499003901  
WHITE SANDS SITE  
TABLE XIII. (Cont)

WSTN SITE COORDINATES  
E 488.500 FEET  
N 185.045 FEET

STATION ALTITUDE FEET	ATMOSPHERIC PRESSURE MILLIBARS	TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(UTN)	INDEX OF REFRACTION
003000.0	7.7	-41.9	0*	287.0	10.7	1.000003
003000.0	7.5	-41.5	0*	285.1	11.6	1.000003
003500.0	7.3	-41.1	0*	283.2	12.5	1.000002
004000.0	7.2	-40.7	0*	283.6	13.6	1.000002
004500.0	7.0	-40.3	0*	285.7	14.9	1.000002
005000.0	6.9	-39.9	0*	287.8	16.1	1.000002
005500.0	6.7	-39.5	0*	289.8	17.3	1.000002
006000.0	6.6	-39.1	0*	290.9	18.1	1.000002
006500.0	6.4	-38.7	0*	291.6	18.7	1.000002
007000.0	6.3	-38.3	0*	292.3	19.3	1.000002
007500.0	6.1	-38.0	0*	293.0	19.9	1.000002
008000.0	6.0	-37.6	0*	293.7	21.0	1.000002
008500.0	5.9	-37.2	0*	297.2	22.2	1.000002
009000.0	5.8	-37.0	0*	300.1	23.4	1.000002
009500.0	5.6	-37.5	0*	302.5	24.6	1.000002
010000.0	5.5	-37.4	0*	301.5	23.0	1.000002
010500.0	5.4	-37.2	0*	300.2	21.2	1.000002
011000.0	5.3	-37.0	0*	299.0	19.4	1.000002
011500.0	5.2	-36.8	0*	297.8	17.6	1.000002
012000.0	5.1	-36.7	0*	296.5	16.2	1.000002
012500.0	5.0	-36.7	0*	298.1	16.2	1.000002
013000.0	5.0	-36.5	0*	298.4	14.8	1.000002
013500.0	4.9	-36.3	0*	293.3	13.4	1.000002
014000.0	4.8	-36.1	0*	290.2	12.9	1.000002
014500.0	4.7	-36.1	0*	299.5	11.9	1.000002
015000.0	4.6	-35.9	0*	299.7	11.0	1.000001
015500.0	4.5	-35.8	0*	299.9	7.9	1.000001
016000.0	4.4	-35.6	0*	232.9	5.9	1.000001
016500.0	4.3	-35.4	0*	600.4	1.000001	
017000.0	4.2	-35.2	0*	600.6	1.000001	
017500.0	4.1	-35.0	0*	600.8	1.000001	
018000.0	4.0	-35.0	0*	601.1	1.000001	

\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3989.0 FEET MSL  
14 OCT. '67 0012 HRS MDT  
ASCENSION NO. 627

UPPER AIR DATA  
0499003401  
WHITE SANDS SITE  
TABLE XIII (Cont.)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREE CENTIGRADE	REL.HUM. PERCENT	SPEED OF WIND DATA METER KNOTS	WIND DATA DIRECTION DEGREES(TN) KNOTS		INDEX OF REFRACTION
					GM/CUBIC METER	SOUND KNOTS	
123500.0	4.0	-34.7	0.	-0.	5.0	601.3	1.000001
124000.0	3.9	-34.9	0.	-0.	5.7	601.3	1.000001
124500.0	3.8	-34.3	0.	-0.	5.6	601.7	1.000001

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3989.0 FEET MSI  
17 OCT. '67 0012 HRS MDT  
ASCENSION NO. 627

MANDATORY LEVELS  
0499003901  
WHITE SANDS SITE

TABLE XIV

WSTM SITE COORDINATES  
E 488.580 FEET  
N 185.045 FEET

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE DEGREES CENTIGRADE	REL.HUM.		WIND DATA	
			AIR DEWPNT	PERCENT	DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	5039.	19.8	10.0	53.	77.6	1.8
800.0	6743.	16.2	5.2	48.	167.0	4.7
750.0	8529.	21.0	3.2	58.	189.4	6.9
700.0	10402.	5.7	0.9	71.	211.2	12.6
650.0	12376.	1.5	-10.1	42.	242.7	10.1
600.0	14484.	-1.0	-19.9	22.	221.2	2.5
550.0	16742.	-6.0	-23.7	23.	161.6	12.7
500.0	19163.	-10.5	-26.4	26.	171.5	12.3
450.0	21795.	-16.1	-31.4	26.	117.7	13.7
400.0	24670.	-22.4	-37.4	26.	94.7	33.1
350.0	27843.	-29.5	-43.3	25.	82.8	36.1
300.0	31392.	-37.6	-51.5	22.**	103.0	25.7
250.0	35464.	-46.2	0.	-0.**	153.1	5.3
200.0	40226.	-54.2	0.	-0.**	202.9	9.2
175.0	42999.	-59.6	0.	-0.**	256.0	12.2
150.0	46128.	-64.1	0.	-0.**	300.9	14.3
125.0	49752.	-68.5	0.	-0.**	333.6	12.4
100.0	54087.	-71.3	0.	-0.**	317.6	7.3
80.0	58454.	-60.7	0.	-0.**	345.5	3.7
70.0	61083.	-67.8	0.	-0.**	157.7	7.5
60.0	64174.	-62.3	0.	-0.**	215.4	12.1
50.0	67889.	-59.9	0.	-0.**	271.4	5.6
40.0	72488.	-58.2	0.	-0.**	164.9	10.7
30.0	76192.	-53.3	0.	-0.**	233.9	7.4
25.0	82356.	-51.9	0.	-0.**	249.7	12.6
20.0	87125.	-49.6	0.	-0.**	225.9	13.6
15.0	93298.	-50.1	0.	-0.**	269.4	16.0
10.0	102075.	-46.0	0.	-0.**	213.0	7.6
7.0	109949.	-40.2	0.	-0.**	285.8	14.9
5.0	117550.	-36.6	0.	-0.**	295.6	15.6

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

RELEASE TIME (MDT)	RAWIN- SONDE #	SECOND-STAGE IMPACT DISPLACEMENT IN MILES DUE TO WIND						AZI- MUTH (DEG- REES)	THEORETICAL IMPACT FROM LAUNCHER (IN MILES)		
		11-216 FT		216-4000 FT		4000-7331 FT					
		PITBAL	N-S	E-W	N-S	E-W	N-S	E-W	RANGE	N-S	E-W
1830	2015	1.5S	4.2W	2.1S	4.0W	1.7S	3.1W	5.3S	11.3W	356.8	63.4
1830	2030	0.8S	4.1W	2.3S	3.1W	1.7S	3.1W	4.8S	10.3W	357.8	63.7
1830	2045	0.2S	3.2W	2.7S	2.5W	1.7S	3.1W	4.6S	8.8W	359.1	63.9
1830	2100	0.7N	3.7W	1.5S	3.3W	1.7S	3.1W	2.5S	10.1W	358.0	66.0
1830	2115	0.2N	1.2W	0.8S	4.3W	1.7S	3.1W	2.3S	8.6W	359.3	66.2
1830	2125	0.3N	1.2W	0.3N	3.3W	1.7S	3.1W	1.1S	7.6W	000.2	67.4
2100	2135	0.7N	0.8W	0.8S	2.3W	3.8N	3.6W	2.8N	6.7W	000.9	71.3
2100	2150	0.1S	0.4W	1.4S	3.1W	3.8N	3.6W	2.3N	7.1W	000.6	70.8
2100	2200	0.0	0.6W	2.2S	3.0W	3.8N	3.6W	1.6N	7.2W	000.5	70.1
2100	2210	0.0	0.1W	2.1S	2.1W	3.8N	3.6W	1.7N	5.8W	001.6	70.2
2100	2220	0.6S	0.5W	1.3S	3.6W	3.8N	3.6W	1.9N	7.7W	000.0	70.4
2100	2230	0.7S	1.3W	1.0S	2.8W	3.8N	3.6W	2.1N	7.7W	000.0	70.6
2100	2237	0.3S	2.8W	2.1S	3.0W	3.8N	3.6W	1.4N	9.4W	358.7	69.9
2100	2248	0.3S	3.5W	1.1S	3.1W	3.8N	3.6W	2.4N	10.2W	358.1	71.0

  

LAUNCHER SETTING (ELEVATION 85.2 DEG., EES QE)	AZI- MUTH (DEG- REES)	RANGE	N-S	E-W
NO WIND IMPACT	010.5	69.7	68.5N	12.7E
PREDICTED SECOND-STAGE IMPACT	006.5	69.0	68.5N	7.8E
SECOND-STAGE IMPACT, RADAR TRACK	360.0	70.0	70.0N	0.0
PREDICTED BOOSTER IMPACT	345.9	78.5	76.1N	19.0W
ACTUAL BOOSTER IMPACT	010.0	1.8	1.8N	0.3E
	N/A	N/A	N/A	N/A

TABLE XV. IMPACT PREDICTION DATA  
MITE-HYDAC STV (SR 061)

RELEASE TIME (HDT)	SECOND-STAGE IMPACT DISPLACEMENT IN MILLIS DUE TO WIND										THEORETICAL IMPACT FROM LAUNCHER (IN MILES)		
	11-216 FT		216-4000 FT		4000-73331 FT		TOTAL		AZIM. MOTH (DEG. REDS)	RANGE	N-S	E-W	
RAMIN- SONDE	FIBAL	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W
21.00	2240	0.3S	3.5W	1.1S	3.1W	3.8N	3.6W	2.4N	10.2W	353.4	75.7	75.6N	3.5W
21.00	2395	0.1S	4.7W	1.9S	4.4W	3.8N	3.6W	1.8N	12.7W	355.4	75.2	75.0N	6.0W
21.00	2320	2.0S	2.3W	2.7S	4.4W	3.8N	3.6W	0.9N	10.3W	357.2	74.2	74.1N	3.6W
21.00	2330	1.9S	2.1W	3.2S	2.4W	3.8N	3.6W	1.3S	8.1W	358.9	71.9	71.9N	1.4W
21.00	2340	2.6S	1.5W	4.8S	2.2W	3.8N	3.6W	3.6S	7.3W	359.9	69.6	69.6N	0.6W
21.00	2350	3.4S	0.2W	4.6S	0.6W	3.8N	3.6W	4.2S	4.4W	001.9	69.0	69.0N	2.3E
21.00	0000	3.2S	0.2W	3.4S	0.9W	3.8N	3.6W	2.8S	4.7W	001.6	70.4	70.4N	2.0E
0016	0014	3.4S	1.2W	4.9S	1.7W	0.5S	4.6W	8.8S	7.5W	359.3	64.4	64.4N	0.8W

ANTI-MOTH (DEG-REES)	MILES FROM LAUNCHER	RANGE	N-S	E-W
LAUNCHER SETTING (ELEVATION 84.9 DEGREES QE)	009.0	74.1	73.2N	11.6E
NO WIND IMPACT	005.2	73.5	73.2N	6.7E
PREDICTED SECOND-STAGE IMPACT	001.0	70.0	70.0N	1.2E
SECOND-STAGE IMPACT, RADAR TRACK	000.3	79.1	79.1N	0.4E
PREDICTED ROOSTER IMPACT	009.0	2.0	2.0N	0.3E
ACTUAL BOOSTER IMPACT	N/A	N/A	N/A	N/A

TABLE XVI. IMPACT PREDICTION DATA  
NIKE-HYDAC STY (SR. 062)

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1. ORIGINATING ACTIVITY (Corporate entity)		2a. REPORT SECURITY CLASSIFICATION <b>UNCLASSIFIED</b>
U.S. Army Electronics Command Ft. Monmouth, New Jersey		2b. GROUP
3. REPORT TITLE <b>METEOROLOGICAL DATA REPORT, NIKE-HYDAC STV (SR 061 and 062)</b>		
4. DESCRIPTIVE NOTES (Type of report and inclusive dates)		
5. AUTHOR(S) (Last name, first name, initial) Sharpe, John M.		
6. REPORT DATE November 1967	7a. TOTAL NO. OF PAGES 49	7b. NO. OF REPS NONE
8a. CONTRACT OR GRANT NO.	9a. ORIGINATOR'S REPORT NUMBER(S) DR-264	
b. PROJECT NO. c. DA Task IV650212A127-02 d.	9b. OTHER REPORT NO(S) (Any other numbers that may be assigned to this report)	
10. AVAILABILITY/LIMITATION NOTICES <b>Distribution of this document is unlimited.</b>		
11. SUPPLEMENTARY NOTES	12. SPONSORING MILITARY ACTIVITY U.S. Army Electronics Command Atmospheric Sciences Laboratory White Sands Missile Range, New Mexico	
13. ABSTRACT <p>Meteorological data gathered for the launching of two Nike-Hydac STV's (SR 061 and 062) are presented for the Space and Missile Systems Organization, the AVCO Corporation, and for ballistic studies. The data appear, along with calculated ballistic data, in tabular form.</p>		

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